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MONTHLY REPORT

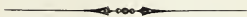
OF THE

DEPARTMENT OF AGRICULTURE

FOR

AUGUST AND SEPTEMBER

1870.



WASHINGTON.  
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# MONTHLY REPORT.

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DEPARTMENT OF AGRICULTURE,  
STATISTICAL DIVISION,  
*Washington, September 15, 1870.*

SIR: I herewith present for publication a report upon the condition of the crops for August and September, with notes from statistical reporters thereon, together with extracts from the correspondence of the Department, address of the Commissioner before the Montgomery County (Maryland) Agricultural Society, and articles on the Southern Agricultural Congress, the Cotton Crop of 1869, Ixtle Fiber, Wheat Culture in South Carolina, Cheese Production, Cotton and Tobacco in Louisiana, Beet-Sugar Factories in California, Canal from the Mississippi River to Lake Borgne, New Fertilizer, Home-made Fertilizers, Frauds in Fertilizers, Market Prices of Farm Products, Crop in England, the Cotton Season of 1869-70 in India, &c.

J. R. DODGE,  
*Statistician.*

Hon. HORACE CAPRON,  
*Commissioner.*

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## CONDITION OF THE CROPS.

### CORN.

This crop has been injured somewhat in localities by the drought, by wet weather, by the heat, by worms, and by early frost, but not sufficiently as yet to threaten a material reduction of the aggregate product heretofore anticipated. The great corn-producing State of Illinois reports the condition of the crop September 1 at 15 per cent. above an average. Missouri, ranking next to Illinois last year in corn production, reports the condition 6 per cent. above average; Indiana claims 25 per cent. above; Ohio, 10 per cent.; Kentucky, 10 per cent.; Tennessee, 20 per cent.; Pennsylvania, 5, and New York, 10 per cent.; Michigan and Wisconsin, 15 per cent.; Minnesota, 10 per cent.; North Carolina, 10 per cent.; South Carolina, 13 per cent.; Georgia, 14, Florida, 15, and Alabama, 7 per cent.; Louisiana, 12, Texas, 4, and Arkansas, 14 per cent.; West Virginia, 16 per cent. Of the New England States, Maine and Vermont report the condition above an average; the former 5 per cent. and the latter 15. New Jersey shows 10 per cent. above an average, while Virginia and Iowa report the promise a full average. The States showing a condition below an average are, New Hampshire, 12 per cent.; Massachusetts, 15; Rhode Island, 9; Connecticut, 20; Delaware and Maryland, 10; Mississippi, 2; Kansas, 12; Nebraska, 5; California, 4, and Oregon, 5 per cent. The crop is one to three weeks in advance, and without early severe frost promises to escape serious injury from that source.

## COTTON.

There is considerable complaint of damage to the cotton crop from rust, the worms, and unfavorable August weather, but the general prospect is not discouraging. The average of reports from North Carolina shows the condition 5 per cent. better than at same date last year; but there are reports of injury by rust, and of bolls falling off, caused by wet weather. South Carolina, 5 per cent. above, but rust prevalent, and the yield diminished by intensely hot and dry weather. Georgia, 5 per cent. above, with the rust and the worms deteriorating the crop to some extent. Rust and dry weather have done considerable damage on the gray lands fertilized with guano. In Florida the condition is 15 per cent. above last year. In Alabama the rust, the drought, and the boll-worm have wrought serious damage, while in some localities rain has induced rot and extensive shedding of young bolls; an average of reports, however, shows the general prospect in the State to be as good as at the same date last year. Mississippi also reports an average condition, though complaints are numerous of the depredations of the boll-worm and of the shedding of bolls from frequent rains. Louisiana 8 per cent. above average condition; the crop is later than usual, and the rains and the caterpillars have done some damage. Texas, 9 per cent. above, with increased acreage. Our Cameron County reporter says, "This valley produced 400 bales last season: will probably produce 2,000 bales this year." The worm has done much damage, and excessive rains have been disastrous in some localities. Arkansas promises 10 per cent. better than at this date last year, with few complaints of injury. The condition in Tennessee and Missouri is about an average, though several correspondents rate the crop considerably below that of last year, unless there should be a similarly favorable fall. There is little in the figures of our reporters to indicate a decreased yield of cotton, and favorable weather henceforth must insure considerable increase.

## WHEAT.

Our returns upon this product pertain chiefly to the condition of the crop when harvested, though the figures indicate in a measure the extent of the yield as compared with an average. At the date of reports, however, the grain had not been thrashed out to any considerable extent, so that our October returns must be had before an estimate of the aggregate wheat production of the year can be made. On condition, when harvested, the States report as follows, (the figures 10 representing an average: ) Maine, 10.1; New Hampshire, 9; Vermont, 9.6; Massachusetts, 10; Connecticut, 9.7; New York, 9.1; New Jersey, 8.1; Pennsylvania 9; Delaware, 7; Maryland, 8.2; Virginia, 9; North Carolina, 10.5; South Carolina, 9.5; Georgia, 11; Alabama, 11; Mississippi, 10; Texas, 9; Arkansas, 10.6; Tennessee, 9.8; West Virginia, 10; Kentucky, 9.6; Missouri, 9.3; Illinois, 10.1; Indiana, 9.5; Ohio, 9.5; Michigan, 9; Wisconsin, 10; Minnesota, 9.8; Iowa, 10.2; Kansas, 10; Nebraska, 9.5; California, 9.7; Oregon, 10.3. In New York the gathered crop has been injured by heavy rains. In New Jersey and Pennsylvania, complaints are heard of shrunken grain, in some cases "hardly worth thrashing." The "scab" proved a serious injury in Maryland and Virginia, caused by heavy rains previous to harvest. Some smut in North Carolina, and injury from wet weather in West Virginia. In Kentucky there was considerable rust in the low lands along the Ohio and Kentucky Rivers. Frequent rains have damaged the grain in the shock in Tennessee and Minnesota. The Michigan harvest was frequently in-

errupted by rain and some grain sprouted in the shock. In Kansas the crop was gathered in good condition, but was considerably damaged by damp weather in August. The quality of the grain thrashed is generally excellent, in many cases compensating for deficient quantity. Reports upon the quality and yield of grain will be found under head of "Notes on the Crops."

#### RYE, OATS, AND BARLEY.

These crops were generally harvested in good condition, with slight local drawbacks. There is an apparent diminution in the rye crop, and also in the barley product. Estimates of the yield of each will be given in our next report.

#### BUCKWHEAT.

Tennessee, Michigan, North Carolina, West Virginia, and Wisconsin are the only States which report the prospect for buckwheat above or up to an average; the Middle and Western States indicate a decline of 5 to 10 per cent.; New England, 15 to 20 per cent. The drought has blighted the crop in some localities.

#### POTATOES.

The drought in many sections, and destructive insects in others, especially in the West, have materially reduced the potato crop. North Carolina, Georgia, Arkansas, Tennessee, and Kentucky alone report the crop above an average—5 to 12 per cent. Connecticut, New Hampshire, Massachusetts, New Jersey, Missouri, Illinois, Indiana, Wisconsin, Minnesota, Iowa, Kansas, and Nebraska report a decline varying from 20 to 30 per cent. Maine, New York, Ohio, Michigan, 10 to 20 per cent.; and Vermont, Pennsylvania, Maryland, Virginia, South Carolina, Alabama, Texas, California, and Oregon, 5 to 10 per cent. decline. Sweet potatoes promise a fair general yield, though Delaware, Maryland, and Virginia show a decline of 10 per cent. in prospect of yield, with a falling off in several of the Western States. New Jersey, South Carolina, Georgia, Florida, Texas, Arkansas, Tennessee, West Virginia, and Kentucky promise a slight increase.

#### HAY.

The product of hay appears to be about 15 per cent. short of last year's crop in New England; 20 per cent. in New York; 15 to 20 per cent. short in Illinois, Missouri, Indiana, Ohio, Wisconsin, Iowa, and Nebraska; and 5 to 10 per cent. in Pennsylvania, Delaware, Michigan, Minnesota, and Kansas. An increase of 5 to 12 per cent. is reported in New Jersey, Maryland, Virginia, North Carolina, South Carolina, Georgia, Arkansas, Tennessee, West Virginia, Kentucky, and California; and of 30 per cent. in Oregon. In most of the States the quality of the crop is above average.

#### SORGHUM AND SUGAR CANE.

Sorghum seems to have been almost entirely neglected east of Pennsylvania. The crop in most of the Western States is reported in fair condition; above average in Tennessee, West Virginia, Kentucky, Illinois, Indiana, and Minnesota; also in Pennsylvania, North Carolina, South Carolina, Georgia, and Texas, in some of which latter States increased interest is being shown in this really valuable product. Louisiana and Florida report the sugar crop 5 to 10 per cent. above average;



Texas, Mississippi, Alabama, and Georgia report from an average to 10 per cent. below.

#### HOPS.

California is the only State that reports increased acreage in this product. Ohio claims an undiminished acreage, but all the other hop-growing regions show a decline of 5 to 15 per cent.—Wisconsin, 10; Michigan, 15. The condition at date of reporting was generally 5 to 15 per cent. below an average.

#### TOBACCO.

This crop is reported 14 per cent. below average in Connecticut, 7 below in Massachusetts, 10 in Maryland, 17 in Mississippi, 4 in Texas; and 2 above in New York, 5 in Pennsylvania, 4 in Virginia, 14 in North Carolina, 10 in South Carolina, 13 in Georgia, 10 in Arkansas, 9 in Tennessee, 5 in West Virginia, 6 in Kentucky, 3 in Indiana, 2 in Ohio; and an average in Missouri, Illinois, and Michigan.

#### FRUITS.

Though there is much complaint of apples falling during the last two months, and of retarded growth caused by the dry weather, a fair product is promised in the Eastern and Middle States generally, and in Virginia, North Carolina, South Carolina, Tennessee, and Kentucky, with from six to nine-tenths of an average crop in the Western States. Peaches have been about three-fourths of a crop in Delaware; an average crop in New Jersey; from 10 to 20 per cent. below an average in New York, Pennsylvania, and Maryland; Virginia, North Carolina, South Carolina, and Florida; three-fourths of a crop in Michigan, and in the West, generally, half to two-thirds of an average yield. Grapes promise an abundant yield almost everywhere, and the general product must be very large. Delaware, North Carolina, Georgia, Alabama, Mississippi, Texas, Arkansas, and Tennessee report less than an average crop; the other States report variously from average up to 25 per cent. above.

#### WOOL.

A slightly increased weight of fleece as compared with an average yield of wool is reported in New Hampshire, Massachusetts, Maryland, Arkansas, Minnesota, and Oregon; and an average weight in Virginia, Kansas, and California. Other States report a decline ranging from 2 to 10 per cent. A small general decline is probable.

#### STOCK HOGS.

There is a decrease reported in the number of fattening hogs, as follows: New Hampshire, Massachusetts, Rhode Island, Georgia, Florida, Alabama, Louisiana, Arkansas, Illinois, from 2 to 5 per cent.; in Indiana, Texas, and Oregon, 5 to 10 per cent.; and an increase of from 2 to 5 per cent. in Maine, Vermont, New York, New Jersey, Pennsylvania, Virginia, North Carolina, South Carolina, Tennessee, West Virginia, Kentucky, Ohio, Michigan, Wisconsin, Minnesota, Iowa, and California; and 5 to 10 per cent. in Missouri, Kansas, and Nebraska. The condition as to size and weight generally compares favorably with that of former years, except in several of the Southern States and in Illinois, Indiana, New Hampshire, Massachusetts, Connecticut, and Oregon, which indicate depreciation in this regard.

Table showing the condition of the crops on the 1st day of August, 1870.

STATES.	CORN.	SPRING WHEAT.	SPRING RYE.	OATS.	BARLEY.	BUCKWHEAT.		POTATOES, (Solanum tuberosum.)	POTATOES, (Batatum edulis, sweet.)	TOBACCO.	MAY.
	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average com- pared with last year.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition of tim- othy Aug. 1.
Maine.....	10	9.5	9.8	9.5	9.4	9.5	8.9	8.9	8.9	.....	8.9
New Hampshire.....	10.5	10.2	10.1	10	9.7	9.2	8.8	9.2	9.2	.....	9.5
Vermont.....	10.1	9.8	9.4	8.5	9.5	9	8.6	9.2	9.2	8.6	10
Massachusetts.....	10.5	10	10	10.1	9	9.2	8	8.5	8.5	.....	9.5
Rhode Island.....	10.5	.....	.....	9.6	9.5	.....	.....	10.3	10.3	.....	10.3
Connecticut.....	10.5	8.5	8.5	9.7	10	9.7	8.7	8.6	8.6	9	9
New York.....	10.7	.....	.....	8.5	8.4	9.1	8.9	9.3	9.3	11	8.3
New Jersey.....	10.6	9.6	9.1	10.3	9.7	9	10.3	9	10.2	9.7	10.1
Pennsylvania.....	10	.....	.....	10.4	.....	9.9	10.2	10	9.3	.....	10.1
Delaware.....	10.2	.....	.....	10	.....	.....	.....	11	10	.....	10.7
Maryland.....	10.7	.....	.....	11	.....	9.5	10.2	9.6	10	10.2	10.7
Virginia.....	10.5	.....	.....	11	.....	9.7	10.6	10.3	10.3	11	10.9
North Carolina.....	10.7	.....	.....	10.8	.....	9.5	10.2	10.1	10.5	10.7	11
South Carolina.....	10.7	.....	.....	9.5	10	.....	.....	9.5	10.1	.....	11
Georgia.....	10.7	.....	.....	9.9	10.1	.....	.....	10.1	10.4	10.5	10.7
Florida.....	10.5	.....	.....	9.5	.....	.....	.....	10.1	.....	.....	.....
Alabama.....	10.6	.....	.....	9.7	.....	.....	.....	.....	9.5	.....	.....
Mississippi.....	9.6	.....	.....	10.6	.....	.....	.....	.....	9.9	9.7	.....
Louisiana.....	10.2	.....	.....	7	8.4	.....	.....	10.3	10.3	10.5	.....
Texas.....	10	.....	.....	10.1	.....	.....	.....	9.8	9.6	8.8	9.5
Arkansas.....	11	.....	.....	10.9	.....	.....	.....	11	10.5	10.1	8
Tennessee.....	10.7	.....	.....	10.6	9.6	10.1	10.4	11	10.3	10.1	10.3
West Virginia.....	11.4	.....	.....	10.1	9.3	9.8	10	10.3	10.1	10.5	10.4
Kentucky.....	11	.....	.....	10.2	10.1	9.4	10.6	10.1	9.6	10.5	10.5
Missouri.....	9.6	8.9	9	8.2	9.2	9.4	8.2	7.6	8.7	8.5	7
Illinois.....	10.6	8.6	8.5	9.1	8.6	9.6	8.3	7.9	9.4	10.2	8.1
Indiana.....	11.2	8.7	9.7	9.6	9	9.7	9.6	8.7	9.7	10.3	8.6
Ohio.....	11	9.7	9.7	11	9.5	10	10.3	9.7	9.9	9.7	8.8
Michigan.....	11.2	9.9	9.5	10.5	10	9.8	10	10	.....	.....	8.1
Wisconsin.....	11	8.3	9.6	7.8	8.4	10.3	9.9	9.2	.....	9.1	8.4
Minnesota.....	10.8	8.7	8.7	8.7	9.2	9.5	8.2	7.7	8.6	8.4	9.2
Iowa.....	9.5	9.5	10	8.9	9.1	8.9	7.8	6.8	9.3	9	8.6
Kansas.....	8	9	9.5	9	10.7	9.4	7.9	7.7	10	7.3	7.3
Nebraska.....	8.6	9.2	.....	9	.....	10.1	9	6.2	.....	.....	11.5
California.....	10.1	8.5	9.6	9.6	9.9	11.2	10.4	10.2	10	9.5	12.1
Oregon.....	10.7	10.9	.....	11.3	10.8	.....	.....	11	.....	.....	.....

Table showing the condition of the crops, &amp;c.—Continued.

STATES.	HAY.		PASTURES.	BEANS.	COTTON.	SORGHUM.	SUGAR CANE. (Not sor- ghum.)	APPLES.	PEACHES.	GRAPES.	CRAN- BERRIES.
	Product of clo- ver compared with last year.	Average con- dition of clo- ver when har- vested.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.	Average con- dition Aug. 1.
Maine.....	7.1	10.3	7.7	9.6				11		9.5	9
New Hampshire.....	8.8	10.1	8.8	9.5				11	10	10.4	10
Vermont.....	9	10.4	7.8	10				10.5	10	10.8	9.5
Massachusetts.....	9.5	9.8	8.6	9.4				11	11	10	10
Rhode Island.....	10	9.6	9.6					10.6	10	10.3	10
Connecticut.....	8.7	9.2	7.7	9		8		11	8.6	10.2	9.8
New York.....	8.1	9.8	8	9.6				10	9.2	11.3	10
New Jersey.....	10.5	10.7	9.8	9.8		9.3		11.5	8.5	10.2	9.5
Pennsylvania.....	10	9.9	10.4	9.9		9.4		8.8	4	8	
Delaware.....	10	11	9	11		10		15			
Maryland.....	10.7	10.5	9.9	9.8		8.3		9.9	8.8	9.6	
Virginia.....	10.8	10.2	11	10.3	10.4	9.9		10.9	9.5	10.3	
North Carolina.....	11.2	10.4	11.1	10.5	10.4	10.3		11.5	11	9.6	
South Carolina.....	10	8	11.1	10.6	10.1	9.2		10.6	7.3	10.8	
Georgia.....	11	10.9	10.8	10.4	10	11.2	10.3	10.5	9.7	9.2	
Florida.....			9.5	10.6	11		10		8.3		
Alabama.....			9.9	9.5	10.2	8.8	10.8	8.5		8	
Mississippi.....	9.5		10.5	9.2	9.5	9.1	10	9.7	7	9.7	
Louisiana.....			9.2	9.6	10		11.1	9	5.5	11.3	
Texas.....			9.6	3.5	9.7		10.1	8.5	4	8.8	
Arkansas.....			10.8	10.6	11	10.8		7.7	8.3	6.7	
Tennessee.....	10.6	10.6	11.6	10.1	9	10.5		10	10	9.6	
West Virginia.....	10.9	9.7	10.6	10.3		10.4		7.6	10	10	
Kentucky.....	10.7	10.6	10.8	10.3		10.5		10.1	7.9	10.5	
Missouri.....	10.4	10.4	11.1	10		10		10.1	5.8	10.2	
Illinois.....	7.7	8.7	6.7	8.1	8.4	8.6		5.4	5.4	10	
Indiana.....	7.9	9.7	7.5	9	10.2	9.6		6.8	7.5	10.1	9.2
Ohio.....	8.9	9.9	9.3	10.2		10.2		6.4	5.8	10.5	
Michigan.....	8.9	9.6	9.8	10.1		9.7		9.2	8.3	9.3	10.3
Wisconsin.....	5.7	9.8	9.4	10		10.9		10.1		10.3	10.6
Minnesota.....	10.3	9.6	8.8	9.7		10.1		8.4	10.3	10.5	11.7
Iowa.....	7.3	9.8	7.3	8.5		9.1		7	9.2	8.3	
Kansas.....	8.7	10	8	7.7		8.6		7	6.8	9.3	
Nebraska.....			8.1	8.8		9.2		6.5	7.8	9	
California.....	10.7	11.2	9	10.1				8.5	7	10.5	
Oregon.....	12.3	9.6	12.3	10.9				7	7	10.4	

Table showing the condition of the crops on the 1st day of September, 1870.

STATES.	CORN.	WHEAT.	RYE.	OATS.	BARLEY.	BUCK- WHEAT.	POTATOES, (Solanum tuberosum.)	POTATOES, (Batatas ed- ulis, sweet.)	TOBACCO.	COTTON.	HAY.		
	Average con- dition Sept. 1.	Average con- dition when harvested.	Average con- dition when harvested.	Average con- dition when harvested.	Average con- dition when harvested.	Average con- dition Sept. 1.	Average con- dition Sept. 1.	Average con- dition Sept. 1.	Average con- dition Sept. 1.	Average con- dition Sept. 1.	Product of tim- e only compar'd with last year.	Average con- dition of tim- e only when harvested.	Product of hay of all kinds comp'd with last year.
Maine.....	10.5	10.1	10.1	10.2	10	8.9	8.5	8.5			8.3	11.2	7.8
New Hampshire.....	8.8	9	9.6	9.2	8.9	7.8	7.2	7.2			8.2	10.5	8.6
Vermont.....	11.5	9.6	9.6	9	10	8.8					9.1	10.8	8.6
Massachusetts.....	8.5	10	9.7	9.3	9.1	8	7.8		9.3		9	10.8	8.6
Rhode Island.....	9.1		10.1	10	10	10	6.8				10	11	10
Connecticut.....		9.7	9	9.2	9.5	7.4	8.8		8.6		7	10.8	7.4
New York.....	11	9.1	8.4	8.5	8.4	9.6	8.8		10.2		7.5	10.5	7.9
New Jersey.....	11	8.1	8.5			9.6					10.3	10.6	10.6
Pennsylvania.....	10.5	9	9	10	9.4	9.5	9.8	10.1	10.5		9.5	9.7	9.6
Delaware.....		7		10		8	9.7		10.5		10	10.3	9
Maryland.....	9	8.2	8.9	11.5	10	9.2	9	9	9		10	10.3	10.8
Virginia.....	10	9	9.5	10.4	10.5	9.6	9.6	9	10.4	9.5	11.3	10.4	10.7
North Carolina.....	11	10.5	9.8	10.5	10.5	10.1	10.5	10.7	11.4	10.5	10.9	9.9	11.1
South Carolina.....	11.3	9.5	10.6	10.7	10	9.4	10.5	10.5	11	10.5			11.5
Georgia.....	11.4	11	10.1	10.2	10.2		10.6	10.4	11.3	10.5	10.6	10.2	10.7
Florida.....	11.5			10.4				10.3		11.5			
Alabama.....	10.7	11	9.8	10.3			9.1	9.7		10			10.1
Mississippi.....	9.8	10	10	11			10	9.8	8.3	10			9.8
Louisiana.....	11.2						10	9.6		10.8			9.8
Texas.....	10.4	9	9.8	9.5	9		10.3	10.3	9.6	10.9			10
Arkansas.....	10.4	10.6		10.5			9.5	11.2	11	11			10.8
Tennessee.....	12	9.8	9.7	10.2	9.8	11	11.2	10.8	10.9	10	10.5	9.6	10.8
West Virginia.....	11.6	10	9.9	10.6	9.8	10	10	10.2	10.5		10.3	10	10.5
Kentucky.....	12	9.6	9.7	10.5	9.5	9.9	11	10.2	10.6		10.8	9.9	10.7
Missouri.....	10.6	9.3	9.5	9	9.8	9.6	8	9.5	10	9.5	7	9.3	7.2
Illinois.....	11.5	10.1	9.8	9.4	10.1	9.5	7.5	9.2	10.3	10.6	7	10.4	7.6
Indiana.....	12.5	9.5	9.8	10	9.7	9.5	7	9.2	10	9.5	7.7	10.3	8
Ohio.....	11	9.5	9.8	9.9	9.5	9.5	8.4	9.9	10.2		8.3	9.6	8.6
Michigan.....	11.5	9	9.5	10.3	9.5	10.3	8.8	9.9	10		7.4	10.3	8.5
Wisconsin.....	11.5	10	9.8	9	9.4	10	7		9.4		10	10.1	8.8
Minnesota.....	11	10.3	10.3	9.4	10.1	9.5	7.2				8	10.5	8.4
Iowa.....	10	10.2	10.2	9.4	10	8.8	7	9.3	9.8		8	10.1	8.8
Kansas.....	8.8	10	10	9.2	9.6	9.5	8	9.3	7.3		8.6	8.7	9.3
Nebraska.....	9.5	9.5	9.5	10.2	9.6	9	8	10.2			10.9	10.7	10.4
California.....	9.6	9.7	10.5	9.8	9.8	9.6	9.4	9.4	9.8		13	11	13
Oregon.....	9.5	10.3	10.5	10.3	10	9.5	9.1	9.1	8.2				



Table showing the condition of the crops, &amp;c.—Continued.

STATES.	BEANS.	SORGH.	SUGAR CANE. (Not sorghum.)	HOURS.		STOCK HOGS.		WOOL.		APPLES.	PEACHES.	Average condition Sept. 1.
	Average condition Sept. 1.	Average condition Sept. 1.	Average condition Sept. 1.	Average condition Sept. 1.	with last year.	Number for fattening compared with last year.	Average condition as to weight and size. (Answer in tenths, questions.)	Weight of fleece compared with an average clip, as with other questions.)	(Answer in tenths, questions.)	Average condition Sept. 1.	Product compared with an average.	
Maine.....	10.7						10.2	10	9.8	12.1		10.5
New Hampshire.....	9			8.7	9.5	9.6	9.6	9.7	10.1	12.5	12.5	10.6
Vermont.....	10.2			9.2	8.2	10.4	10.2	10.2	10.2	12.5		12.5
Massachusetts.....	8.6					9.8	9.6	9.6	10.5	14	12	11
Rhode Island.....	10					9.6	10	10	10	10.3	8.3	10.3
Connecticut.....	9.6	8.3				10	9.6	9.8	9.8	13	9.4	12.5
New York.....	9.8			9.3	10	10.4	10.1	9.9	9.9	10.7	9	11.5
New Jersey.....	8.7					10.2	10.2	9.9	9.9	12.5	10	10
Pennsylvania.....	9.8	10.2		9.2	9	10.2	10.1	10.8	10.8	9	8.3	10
Delaware.....	10.9	9				10	10	10	10	12.5	8	4
Maryland.....	9.5	8.5				10	9.7	10.1	10.1	9.7	9.1	10.4
Virginia.....	9.2	9				10.5	10	10	10	10.7	9.2	10.3
North Carolina.....	9.6	10.9				10.2	10.9	9.9	9.9	11.5	9.6	9
South Carolina.....	10.3	10.5				10.5	10.1	9.9	12	9.2	9.2	11
Georgia.....	10.4	10.8				9.8	9.5	9.6	9.6	9.6	6.7	8.6
Florida.....	10	10.5				9.8	9.6	10	10	9		
Alabama.....	9.5	9.6				9.6	9.8	9.6	8.3	5	5	8.2
Mississippi.....	10.6	8.3	9			10	9.4	9	9.6	9.7	5	9.7
Louisiana.....	10.7	10.7				9.6	9.2	10	10.2	10.2	3	11
Texas.....	10.6	10.2	9.1			9.4	9.7	9.6	6.3	7	3	7
Arkansas.....	10.5					9.6	9.8	10.2	7.5	3	3	4.7
Tennessee.....	10.6	10.7				10.4	10.4	9.8	10.4	6.7	6.7	9.6
West Virginia.....	10.3	10.1				10.3	10.3	9.5	10.3	7	7.5	10.3
Kentucky.....	10.8	10.5		9.8		10.2	10.1	9.5	10.3	10.4	6	10.4
Missouri.....	8.3	10				10.6	10.1	9.5	6.2	6	6	10.2
Illinois.....	8.3	10.4		9.6	8.7	3.6	3.7	9.4	8.5	7	9.5	11.1
Indiana.....	10.2	10.4		3.7	9.8	3.6	9.9	9.7	9.7	7	7	11.2
Ohio.....	3.6	10		19	9.5	10.2	10.2	9.4	7.8	6	6	10.6
Michigan.....	10	10		8.5	9.4	10.5	10.2	9.5	9.6	9.6	7.5	10
Wisconsin.....	9.8	10		9	9.5	10.4	10	9.7	8.8	9.8		10.7
Minnesota.....	10	10.4		9.2	9.6	10.5	10.4	10.2	9.8	9.8		9.8
Iowa.....	8.5	9.5		9.2	8.9	10.3	10.1	9.8	10	9	9	10
Kansas.....	8	9.2				10.7	10.1	10	9.8	7	6	10.5
Nebraska.....	8.8	9.5				11.5	10.6	9.9	8.5	8.5	11	10.2
California.....	9.5			10.5	9.5	10.2	10	10	7.6	8.8	7.6	10.6
Oregon.....	9.5			9.5		9.2	9.5	10.4	8	8	8.5	10



## NOTES ON THE CROPS.

## CORN.

- Piscataquis County, Me.*—Injured by frost.
- Hillsborough County, N. H.*—Injured severely by drought.
- Strafford County, N. H.*—A fair average crop of good quality.
- Rockingham County, N. H.*—Suffers materially from drought.
- Orleans County, Vt.*—More than an average crop.
- Berkshire County, Mass.*—A very excellent crop.
- Plymouth County, Mass.*—Many fields have been cut up for fodder.
- Wayne County, N. Y.*—A larger yield than ever before.
- Onondaga County, N. Y.*—Crop above the average.
- Otsego County, N. Y.*—The crop will be a fine one.
- Chautauqua County, N. Y.*—The finest crop for the last six years.
- Niagara County, N. Y.*—“The best crop I ever knew.”
- Sussex County, N. J.*—A good crop, considering the drought.
- Hunterdon County, N. J.*—The crop damaged by the heat and drought of August.
- Lehigh County, Pa.*—In the northern part of the county, on the slate soil, corn has suffered a great deal from drought; in the southern part, and on the heavy limestone soils, the crop is good.
- Franklin County, Pa.*—If there are no early frosts there will be a good crop.
- Baltimore County, Md.*—An ordinary crop.
- Queen Anne County, Md.*—A full average crop.
- King George's County, Va.*—A crop about as large as that of last year.
- Fairfax County, Va.*—A fair average yield.
- Henry County, Va.*—The crop will be a full one.
- Northumberland County, Va.*—In consequence of the severe drought the crop will fall short about one-third.
- Nansemond County, Va.*—Suffering severely from drought.
- Norfolk County, Va.*—About one-fourth cut off by drought.
- Henrico County, Va.*—Probably less than half an average crop.
- Wythe County, Va.*—Never looked better.
- Surry County, Va.*—About half an average crop.
- Spottsylvania County, Va.*—Much better than last year's crop.
- Gloucester County, Va.*—Scarcely half an average.
- Amelia County, Va.*—A good crop.
- Greene County, Va.*—The crop will be exceedingly short.
- Alamance County, N. C.*—Twenty per cent. above the average.
- Edgecombe County, N. C.*—Twenty-five per cent. less than an average.
- Caldwell County, N. C.*—Much damaged by rains.
- Le Noir County, N. C.*—Fallen short about one-tenth since last report.
- Forsyth County, N. C.*—Prospect for a fine crop never better.
- Rockingham County, N. C.*—The best crop for many years.
- Davie County, N. C.*—In better condition than for years.
- Williamsburg County, S. C.*—Better crops than since 1864.
- Lexington County, S. C.*—The yield will more than double that of last year.
- Columbia County, S. C.*—Bids fair to be one of the largest crops ever raised in the county.
- Decatur County, Ga.*—Short crop; worth \$1 60 per bushel.
- Jackson County, Ga.*—An excellent crop.
- Taylor County, Ga.*—The yield per acre has not been better for many years.

- Heard County, Ga.*—One-third larger crop than last year.
- Liberty County, Ga.*—A fair crop.
- Towns County, Ga.*—Crop never better.
- Carroll County, Ga.*—The crop has never been equaled in the county.
- Oglethorpe County, Ga.*—Prospect of an unusually good crop.
- Chattooga County, Ga.*—An unusually good crop.
- Spalding County, Ga.*—In area and production largely in excess of last year's crop.
- Nassau County, Fla.*—An average crop.
- Randolph County, Ala.*—Five-tenths above an average crop, notwithstanding damages by smut.
- Conecuh County, Ala.*—A good crop.
- Monroe County, Miss.*—A better crop than that of last year.
- Claiborne County, Miss.*—A fair average yield.
- Newton County, Miss.*—A decrease of 10 per cent. in acreage. Average condition not good.
- Grenada County, Miss.*—The early planting was seriously injured before the season set in. Late planting very good.
- Washington Parish, La.*—The crop exceeds the highest expectations.
- Grimes County, Texas.*—The crop is three-tenths larger than last year.
- Harris County, Texas.*—Less land devoted to corn than last year.
- Kendall County, Texas.*—A good crop is secured.
- Columbia County, Ark.*—A good average crop, but the acreage smaller by two-tenths.
- Newton County, Ark.*—Injured considerably by the dry weather in July and August, yet the crop will be two-tenths better than last year.
- Clark County, Ark.*—An average crop.
- Smith County, Tenn.*—A large crop.
- Coffee County, Tenn.*—One of the best crops for many years.
- Giles County, Tenn.*—Never a finer prospect for an abundant crop.
- Monroe County, Tenn.*—An excellent crop.
- Humphreys County, Tenn.*—Better than for many years.
- Fayette County, Tenn.*—Late corn promises an abundant yield.
- Hawkins County, Tenn.*—Upland better than last year; that on river bottoms not so good, on account of abundant rains.
- Henry County, Tenn.*—A fine crop.
- Raleigh County, W. Va.*—An extraordinary corn season.
- Monongalia County, W. Va.*—Prospect of an average crop.
- Morgan County, W. Va.*—The season has been especially favorable for corn.
- Webster County, W. Va.*—An excellent crop.
- Preston County, W. Va.*—A bountiful crop.
- Mineral County, W. Va.*—Injured by grasshoppers.
- Tyler County, W. Va.*—Injured by dry weather while the ear was forming.
- Brooke County, W. Va.*—In excellent condition, and farmers are in expectation of at least two-tenths more than last year.
- Warren County, Ky.*—The largest crop ever grown in the county.
- Henry County, Ky.*—A successful crop.
- Owen County, Ky.*—There is prospect of only an average crop.
- Scott County, Ky.*—Not as heavy as was expected a month ago.
- Butler County, Ky.*—A large crop.
- Shelby County, Ky.*—Prospects flattering.
- Oldham County, Ky.*—Never better.
- Russell County, Ky.*—Better than it has been for ten years.
- Edmonson County, Ill.*—Appearance promising.

*Livingston County, Mo.*—An average crop.

*De Kalb County, Mo.*—A very large crop will be harvested if frost holds off twelve days.

*Holt County, Mo.*—Will have an average of 45 to 50 bushels per acre, of excellent quality, on deep-plowed land.

*Cass County, Mo.*—A good two-thirds crop.

*Macon County, Mo.*—Best crop in twenty years.

*Linn County, Mo.*—Late corn is doing well.

*Scott County, Mo.*—The best crop ever seen here.

*Lafayette County, Ill.*—The prospect is by far the best we ever had in this county. More than double the usual amount will be raised.

*Edwards County, Ill.*—Excellent.

*Stephenson County, Ill.*—Our crop is both forward and heavy.

*Schuyler County, Ill.*—A full average.

*McHenry County, Ill.*—Three weeks more forward than usual at this season, and nearly beyond the reach of frost.

*St. Clair County, Ill.*—Promises to be unusually good.

*Lawrence County, Ill.*—Unusually promising.

*Jackson County, Ill.*—A good crop.

*Kankakee County, Ill.*—Prospects never so promising.

*Boone County, Ill.*—Not more than an average yield.

*Brown County, Ill.*—The yield is enormous.

*Page County, Ill.*—The acreage is greater than ever, and the yield unusually large. The product will be double that of any year since 1860.

*Livingston County, Ill.*—Good.

*Grundy County, Ill.*—Drying up, and ripening twenty to thirty days earlier than usual.

*Clay County, Ill.*—The largest crop ever raised in the county.

*Winnebago County, Ill.*—The crop is very forward.

*Williamson County, Ill.*—Better than for several years.

*Jo Daviess County, Ill.*—An average crop.

*Hendricks County, Ind.*—The crop is almost without precedent.

*Cass County, Ind.*—Corn is out of the way of frost, and is the most abundant crop ever known.

*Blackford County, Ind.*—An unusually good crop.

*Kosciusko County, Ind.*—An unusually fine crop.

*Fountain County, Ind.*—A very heavy crop and ripening fast. The acreage is large.

*Floyd County, Ind.*—The crop has not been as good in twenty years.

*Ohio County, Ind.*—The August drought has reduced corn from an average to seven-tenths of an average.

*Benton County, Ind.*—The prospect is that the crop will be the heaviest ever known, notwithstanding some injury from drought in July.

*Jennings County, Ind.*—A very hot and dry summer has shortened the yield of corn as well as that of all other crops.

*Marion County, Ind.*—The prospect is excellent.

*Miami County, Ind.*—Drought is affecting late-planted corn.

*Jefferson County, Ind.*—A hundred per cent. better than usual.

*Athens County, Ohio.*—Corn suffered severely from drought in July and August, and the crop will be light.

*Meigs County, Ohio.*—The crop will be a short one.

*Williams County, Ohio.*—The crop is above an average, and at this date (August 26) is nearly ripe, the season being two weeks earlier than usual.

*Noble County, Ohio.*—Corn was never better.



*Lake County, Ohio.*—Corn is looking badly, owing to extremely wet weather.

*Ashland County, Ohio.*—Corn is an average crop, and, like most other crops this season, is nearly three weeks earlier than usual.

*Hamilton County, Ohio.*—The crop is suffering from want of rain.

*Marion County, Ohio.*—Injured by drought.

*Crawford County, Ohio.*—The crop is better than usual; much of it already ripe.

*Mercer County, Ohio.*—The best crop for many years.

*Seneca County, Ohio.*—A larger crop than ever before.

*Erie County, Ohio.*—The best crop ever grown here.

*Montcalm County, Mich.*—A very large crop.

*Ionia County, Mich.*—The crop is a very good one, with the exception that it is affected by smut.

*Cass County, Mich.*—The crop is being injured by drought.

*Branch County, Mich.*—The best crop ever known, and two weeks earlier than usual.

*Calhoun County, Mich.*—Corn is excellent, most of it ready to cut up.

*Van Buren County, Mich.*—Drought has been continuous since June 15, and corn, which had given excellent promise, is now drying on the cob.

*Washtenaw County, Mich.*—A splendid crop in quantity and quality. Much of it has been cut.

*Walworth County, Wis.*—The crop will be light. The harvest is earlier than usual.

*Marquette County, Wis.*—Late rains have materially assisted the corn crop, which now promises to be heavy.

*Green Lake County, Wis.*—Will be a good crop.

*Dakota County, Minn.*—The best year for corn we have ever had.

*Fillmore County, Minn.*—Promises a larger yield per acre than we have had for years.

*Wright County, Minn.*—Damage by frost August 12 and subsequent dates.

*Houston County, Minn.*—Corn will not make an average yield, but is sound.

*Sac County, Iowa.*—Many fields have been nearly ruined by the drought; others, cultivated more deeply and planted in good season, give nearly an average crop.

*Lee County, Iowa.*—The crop has been greatly improved by rains of August 2 and subsequent dates.

*Muscatine County, Iowa.*—Corn has improved rapidly within three weeks, and if frost holds off till quite late the crop will be better than that of last year.

*Cedar County, Iowa.*—A heavy rain, August 24, has greatly revived corn, and a large crop will be secured unless early frost prevents.

*Cherokee County, Iowa.*—Corn on new ground is almost an entire failure, and many are cutting it up for fodder. The driest season known for twelve years.

*Appanoose County, Iowa.*—The late rains have worked wonders with corn; the stand is good, and as the acreage is increased the prospect is that the product will be larger than in any previous year.

*Page County, Iowa.*—A heavy crop.

*Doniphan County, Kans.*—Late rains will bring the crop up to an average. Had it not been for the severe drought the crop would have been the heaviest ever reported here.

*Cherokee County, Kans.*—Corn is very wormy; the yield, about fifteen

bushels per acre, or one-third of an average. Thousands of acres will not average more than nine bushels per acre.

*Leavenworth County, Kans.*—The crop is excellent.

*Osage County, Kans.*—In consequence of late rains the prospect now is that the crop will be good.

*Douglas County, Nebr.*—Corn planted early and well worked has eared well and will give a good crop.

*Otoe County, Nebr.*—Corn will be about an average crop.

*Jefferson County, Nebr.*—There will be about seven-tenths of an average crop.

*Lancaster County, Nebr.*—The crop will be an average one.

*Hall County, Nev.*—The crop will fall short, on account of drought.

*Douglas County, Oreg.*—The crop has been injured by drought. In some localities whole fields are not worth gathering.

#### COTTON.

*Nansemond County, Va.*—There is promise of a fine crop.

*Sampson County, N. C.*—Never so large before, but the fruitage is not expected to be equal to the growth of the plant.

*Anson County, N. C.*—A good yield, unless damaged by rust.

*Columbus County, N. C.*—A material increase of acreage.

*Franklin County, N. C.*—The forms have fallen off badly on account of the wet weather.

*Mecklenburg County, N. C.*—A better crop than last year.

*Greene County, N. C.*—Scarcely two-thirds of an average crop.

*Edgecombe County, N. C.*—Twenty-five per cent. less than an average.

*Duplin County, N. C.*—Largely injured by rust.

*Gaston County, N. C.*—A good crop.

*Williamsburg County, S. C.*—Rust is prevailing to some extent.

*Fairfield County, S. C.*—Prospect greatly diminished by the intensely hot and dry weather.

*Richland County, S. C.*—A good average crop.

*Marion County, S. C.*—Rust more general than since 1848.

*Union County, S. C.*—August has been very unfavorable to the crop.

*Abbeville County, S. C.*—Prospect of a good average crop and more.

*Decatur County, Ga.*—Suffering from rust.

*Columbia County, Ga.*—Rust and the army worm have materially injured the crop, say three-tenths.

*Warren County, Ga.*—Crop will fall considerably below that of last year.

*Macon County, Ga.*—Rust and dry weather have done considerable damage on the gray lands that have been fertilized with guano. In other localities the condition of the crop is above an average.

*Butts County, Ga.*—Long spells of wet and dry weather have somewhat injured the crop.

*Brooks County, Ga.*—Much injured by rust. A larger acreage than last year.

*Glynn County, Ga.*—Acreage much reduced from last year.

*Milton County, Ga.*—Much above the average.

*Taylor County, Ga.*—Every crop more or less damaged by rust.

*Heard County, Ga.*—Over an average crop.

*Liberty County, Ga.*—A fair crop.

*Colquitt County, Ga.*—Above an average crop, on account of the increased quantity of guano used this year.

*Talbot County, Ga.*—Failing on account of drought and extreme heat.

*Harris County, Ga.*—About an average.

*Sumter County, Ga.*—A fair crop.

*Schley County, Ga.*—Failing fast, on account of rust and drought.

*Scriven County, Ga.*—The poorest prospect in many years.

*Oglethorpe County, Ga.*—Prospect for an unusually large crop, better than for many years.

*Terrell County, Ga.*—Guanoed cotton dead on account of excessive drought.

*Hancock County, Ga.*—Drought and rust have materially lessened the prospect of a good crop.

*Liberty County, Fla.*—The best crop ever made in the county.

*Bradford County, Fla.*—The yield bids fair to be good.

*Leon County, Fla.*—Crop will be short and gathered early.

*Perry County, Ala.*—Much of the cotton land, prepared with commercial manures, has failed to produce fair crops.

*Greene County, Ala.*—Rust and the boll-worm are proving very destructive to the crop. Rust worse than ever known before in the county.

*Macon County, Ala.*—The crop has been seriously injured by drought and rust. Guano has done injury, owing to the extremely hot weather in the month of August.

*Butler County, Ala.*—Crop injured by rust.

*Clarke County, Ala.*—Much injured by rust.

*Randolph County, Ala.*—There is promise of a very large crop.

*Conceh County, Ala.*—Has come out beyond the expectations of all farmers. Prospect of a fine crop.

*Marengo County, Ala.*—Too much rain has produced rot, rust, and extensive shedding of squares and young bolls.

*Marshall County, Ala.*—On account of rains there will not be more than half a crop.

*Sumter County, Ala.*—Only a small amount of middling cotton will be raised.

*Autauga County, Ala.*—Dry weather has seriously injured the crop.

*Claiborne County, Miss.*—Unless the fall prove very fine the crop will be at least 15 or 20 per cent. less than that of last year.

*Holmes County, Miss.*—The boll-worm has made extensive ravages, and the frequent showers in August caused more shedding than usual.

*Marion County, Miss.*—There is fair promise of an unusual yield.

*Hinds County, Miss.*—A very short crop.

*Rankin County, Miss.*—Opening finely, and promises a fair average yield.

*Monroe County, Miss.*—Greatly-decreased crop on account of ravages of the boll-worm.

*Newton County, Miss.*—Nothing disastrous occurring, the yield will be fully 33½ per cent. in excess of that of last year. Increase in acreage, fully 10 per cent.

*Grenada County, Miss.*—The crop may be equal to last year, but not larger.

*Clark County, Miss.*—A larger acreage, but the crop will fall short of last year's on account of black rust.

*Yalabusha County, Miss.*—On bottom lands seriously injured by too much rain. On hill land doing better than usual.

*St. Helena Parish, La.*—Has shed badly on account of the rains. At least two weeks later than last year.

*Rapides Parish, La.*—A decrease in yield of 20 to 25 per cent. on account of rains and the caterpillar.



*Ouachita Parish, La.*—Crop will be heavier than last year's by 25 per cent.

*Winn Parish, La.*—The yield will be at least 5 per cent. larger than that of last year, notwithstanding the excessive rains.

*Tensas Parish, La.*—An abundant yield; more than can be gathered with the available labor.

*Washington Parish, La.*—A very favorable year for cotton. Crop will exceed that of last year by one-third.

*Coryell County, Tex.*—Cotton was never planted in this county until 1869, and then only a small acreage; the yield was fine. This year at least thirty acres to one were planted.

*Henderson County, Tex.*—Grass-worms made their appearance fifteen days ago, and have injured the crop as much as the good weather improved it. In a few instances they have destroyed the crop entirely. Injury, at least three-tenths. The crop is in a critical condition.

*Dallas County, Tex.*—A promise of the largest crop ever raised in the county.

*Cameron County, Tex.*—A much larger area planted than last year. This valley produced four hundred bales last season; will probably produce two thousand this year. A large proportion of the cotton product goes to Mexico.

*Red River County, Tex.*—The poorest cotton prospect in the last twenty-eight years. A late frost and seasonable showers may give a half crop.

*Fannin County, Tex.*—Has sustained serious injury from the louse and army-worm. Fully two weeks earlier than last year's crop.

*Gonzales County, Tex.*—Planters are counting upon one bale per acre. The worm is now at work, but has begun so late as to cause but little apprehension.

*Williamson County, Tex.*—It is thought that 5,000 bales of 500 pounds each will be produced. In 1869 1,300 bales were produced.

*Titus County, Tex.*—Great damage being done to crop by heavy rains.

*Matagorda County, Tex.*—There will not be over one-third to half a crop, on account of wet weather and worms.

*Collin County, Tex.*—Better than last year, and with a favorable picking season, will be a heavy crop, perhaps 7,000 to 8,000 bales.

*Grimes County, Tex.*—Good yield and fine staple.

*Austin County, Tex.*—Although the acreage was larger, the yield is smaller than last year, on account of wet weather and the army-worm.

*Coryell County, Tex.*—The prospect for a good crop was never better. Farmers are planting cotton to the exclusion of corn.

*Kendall County, Tex.*—About a bale to the acre is expected, if labor can be procured for picking.

*Goliad County, Tex.*—The worm has made its appearance, and some crops have been almost entirely destroyed.

*Rusk County, Tex.*—The crop looks well, and has sustained little damage from worms.

*Smith County, Tex.*—If the fall season prove as late as last year, the crop will be above an average.

*Fayette County, Tex.*—On account of the worm, cotton will be shorter than last year.

*Wharton County, Tex.*—The prospect was good until about the 21st of August, when the worm commenced its ravages. The crop has been injured, and will be little better than last year.

*Dallas County, Tex.*—The best crop ever known in the county.

*Union County, Ark.*—Looks better than for many years. A large crop and greater acreage than in any year since the war.

*Clark County, Ark.*—A better crop than last year. Acreage much larger.

*Jackson County, Ark.*—Somewhat injured by rains.

*Crawford County, Ark.*—Above any preceding year.

*Columbia County, Ark.*—The most promising prospect for the last twenty years.

*Prairie County, Ark.*—A late fall will give the largest cotton crop ever raised in the county.

*Giles County, Tenn.*—Nothing but a very late and favorable fall will insure half a crop.

*Rutherford County, Tenn.*—Unless frost should be later than usual, there will be about eight-tenths of a crop.

*Fayette County, Tenn.*—An average crop, if the weather continues favorable.

#### WHEAT.

*Chautauqua County, N. Y.*—Winter wheat is not yielding as much per acre as was expected before thrashing. The quality of wheat is good.

*Tompkins County, N. Y.*—Wheat not full in head, but very choice in quality, well gathered.

*Erie County, N. Y.*—Moist, damp weather caused late wheat to rust.

*Westchester County, N. Y.*—Wheat and oats have suffered somewhat from drought, but will make average crops.

*Sussex County, N. J.*—Not more than three-quarters of a crop; the grain shrunken.

*Morris County, N. J.*—Not much over half a crop, though there is abundance of straw.

*Warren County, N. J.*—A little short in quantity, but of fair quality.

*Burlington County, N. J.*—Gathered in good condition.

*Perry County, Pa.*—Not more than half a crop.

*Lebanon County, Pa.*—The crop is about half an average; turning out two to six bushels to the hundred sheaves.

*Adams County, Pa.*—Owing to the long-continued wet weather in spring, wheat and rye are little more than half an average crop, in some cases hardly paying for thrashing.

*Butler County, Pa.*—A large crop; harvested in good condition; the grain well filled. The acreage is 20 per cent. above an average.

*Montgomery County, Pa.*—Inferior to last year's crop in quantity and quality.

*Prince George's County, Md.*—The crop is a failure.

*Cecil County, Md.*—Not more than half an average crop, and of inferior quality.

*St. Mary's County, Md.*—The crop was much injured by scab produced by heavy rains before harvest.

*Kent County, Md.*—Injured by scab.

*Howard County, Md.*—In consequence of heavy rains and scab there will not be more than seven-tenths of a crop; the quality very poor.

*Highland County, Va.*—More than an average crop.

*Pulaski County, Va.*—The crop harvested in slightly damaged condition, from abundant rains.

*Madison County, Va.*—Generally speaking, the yield is smaller than that of last year.

*Botetourt County, Va.*—The crop will be smaller than that of last year.

*King George's County, Va.*—Rated at four-fifths of last year's crop.

*Nelson County, Va.*—The crop falls from one-half to three-fifths below the reasonable expectations of farmers.



*Spottsylvania County, Va.*—Tappahannock wheat is a fine crop. All late wheat badly injured by scab.

*Charlotte County, Va.*—Average condition good; yield below the average.

*Stokes County, N. C.*—The yield is not so great as expected; the quality very good. Considerable smut in some localities.

*Chowan County, N. C.*—The crop is good; harvested in excellent condition.

*Davidson County, N. C.*—The best crop for several years.

*Burke County, N. C.*—A month before harvest the crop was very promising; but it headed badly, the stalks being quite uneven in height, the heads-short, and, in general, the yield light, although the grain is good.

*New Hanover County, N. C.*—A very fine crop; best for eight years.

*Greenville County, S. C.*—Red-bearded Mediterranean wheat, on rather poor upland, thrashed 12 bushels per acre, weighing sixty pounds per bushel. Condition, excellent. Straw was five feet long.

*Dawson County, Ga.*—The yield surpasses expectations; it will average 50 per cent. over that of last year.

*Forsyth County, Ga.*—The crop is considerably above an average.

*Campbell County, Ga.*—Turns out better than expected. No complaint of rust this year.

*Gilmer County, Ga.*—Best crop of wheat for many years.

*Levis County, W. Va.*—The crop was excellent; harvested in good condition.

*Putnam County, W. Va.*—The present crop falls short of last year's from a fourth to a third. The quality does not equal expectations.

*Webster County, W. Va.*—Crop considerably over the average.

*Tyler County, W. Va.*—Crops generally pretty good.

*Livingston County, Ky.*—The yield is not large, but the quality is good.

*Owsley County, Ky.*—The crop is as good as that of last year, and the acreage five times as large. The product will average fifteen bushels to one of seed.

*Carroll County, Ky.*—Wheat is rather below an average. Rust affected the crop in some of the lowlands along the Ohio and Kentucky Rivers.

*Hardin County, Ky.*—Yields several bushels less per acre than were anticipated.

*Warren County, Ky.*—Quality fine and yield large.

*Butler County, Ky.*—Damaged by wet weather.

*Shelby County, Ky.*—About one-half a crop.

*Russell County, Ky.*—Some loss on account of rain, but a better crop than last year.

*Christian County, Ky.*—Almost entirely ruined by the constant rains from June to the present time.

*Oldham County, Ky.*—Deficient.

*Montgomery County, Tenn.*—An immense amount lost by wet weather.

*Smith County, Tenn.*—Greatly damaged in the shock by the rains.

*Coffee County, Tenn.*—All damaged in the shock.

*Monroe County, Tenn.*—Some crops damaged in the shock by wet weather.

*Fayette County, Tenn.*—Fully up to average.

*Hawkins County, Tenn.*—Damaged to a considerable extent by the rains.

*Greene County, Mo.*—Not a large yield, but good quality.

*Vernon County, Mo.*—Average yield, 12½ bushels per acre.

*Cass County, Mo.*—Quality excellent; yield not quite an average.

*Taney County, Mo.*—Deficient in quantity, but good in quality.

*Cape Girardeau County, Mo.*—Injured much since harvest by rains. The grain is very plump.

*St. Francois County, Mo.*—Very short crop; quality excellent.

*Polk County, Mo.*—Will not average more than half a crop.

*Edwards County, Ill.*—As far as is known, has not yielded as well in weight as was expected.

*Stephenson County, Ill.*—The quality was never better.

*Lee County, Ill.*—The average yield, as indicated by thrashing, so far, is seven bushels per acre; quality excellent.

*St. Clair County, Ill.*—The crop is now being thrashed and marketed in fine condition.

*Lawrence County, Ill.*—Yielding well, and quality excellent. Less wheat will be sown the coming season than for several years past. Farmers conclude that it does not pay.

*Boone County, Ill.*—Quality good, but not half a crop.

*Livingston County, Ill.*—Not an average crop.

*Washington County, Ill.*—An average yield and superior quality.

*Putnam County, Ill.*—Quality good, but yield light.

*Winneshago County, Ill.*—The quality is very fine.

*Whiteside County, Ill.*—The berry is better than for years, and will furnish excellent flour.

*Lake County, Ill.*—Better in quality than in 1869, but the yield will fall short.

*Williamson County, Ill.*—But little inferior to our average yield.

*Bureau County, Ill.*—The quality is good, but the yield very small.

*Marion County, Ill.*—The crop is a short one; the quality good.

*Fulton County, Ill.*—Although the straw is light the yield in grain is satisfactory; the quality the best for many years.

*Henderson County, Ill.*—Wheat is thin on the ground, but the grain is excellent.

*Alexander County, Ill.*—Winter wheat is very poor, and averages about 7 bushels per acre.

*Pike County, Ill.*—Less than a full crop, although turning out better than expected; the quality excellent.

*Sullivan County, Ind.*—The crop is not as large as that of last year; will average 10 bushels per acre.

*Miami County, Ind.*—Will average about 10 bushels per acre.

*Franklin County, Ind.*—Not more than seven-tenths of last year's crop; the quality good. The price fluctuates from \$1 to \$1 40 per bushel.

*Delaware County, Ind.*—Wheat was badly damaged by winter-killing, but the grain is plump and of excellent quality.

*Elkhart County, Ind.*—Wheat, our staple crop, was harvested in good condition.

*Warren County, Ind.*—A large portion of the crop has been thrashed, and thus far does not exceed eight bushels per acre; the quality is good. The seeding will be large this fall, and early.

*Washington County, Ind.*—The yield is probably not more than one-third that of last year.

*Kosciusko County, Ind.*—Secured in excellent condition.

*Jennings County, Ind.*—A very hot and dry summer. Wheat and all other crops are short.

*Putnam County, Ind.*—Two-thirds of a crop, but above average in quality.

*Whitley County, Ind.*—Nine-tenths of an average crop; but the qual-

ity is one-tenth better than that of last year. The price is higher than then, being \$1 to \$1 05 per bushel for old wheat, and \$1 10 for new.

*Johnson County, Ind.*—Thrashers estimate the yield at little more than half that of last year; but the quality is No. 1.

*Miami County, Ohio.*—Wheat has been harvested in excellent condition, averaging 25 bushels per acre; the grain very heavy.

*Hardin County, Ohio.*—The crop was somewhat deficient in quantity, but the grain was very plump.

*Noble County, Ohio.*—The yield is smaller than that of last year; the quality better.

*Marion County, Ohio.*—Winter wheat is of excellent quality, and a larger crop than was expected.

*Jackson County, Mich.*—The harvest was considerably interrupted by frequent rains, and the crop was somewhat damaged.

*Lapeer County, Mich.*—The crop was thin on the ground, owing to winter-killing; the berry is good.

*Ionia County, Mich.*—Much was winter-killed, and a considerable part of the crop sprouted before it was housed.

*Cass County, Mich.*—Wheat thrashed in fine condition. It is yielding 20 per cent. more flour to the acre, and of higher grade, than was obtained last year.

*Van Buren County, Mich.*—Drought since June 15. The wheat crop falls far short of what was anticipated.

*Washtenaw County, Mich.*—Wheat is remarkably plump, and turns out better than was expected.

*Washington County, Wis.*—The grain is very plump; weighs 60 to 62 pounds per bushel. Average crop about 14 bushels per acre.

*Walworth County, Wis.*—Not more than three-fifths of an average crop, but superior in quality.

*Waushara County, Wis.*—The yield is very deficient; the quality good.

*Fond du Lac County, Wis.*—Wheat is very plump and sound. Nearly all will be No. 1.

*Dunn County, Wis.*—Early sown wheat, on clay soil, is nearly an average crop, while that sown later, and on sandy soil, is very light.

*Grant County, Wis.*—Owing to severe drought in June and July the crop is less than that of last year; but what is wanting in quantity is more than made up by superior quality.

*Jackson County, Wis.*—A light crop, but of good quality.

*Milwaukee County, Wis.*—A good yield of grain of the very best quality.

*Marquette County, Wis.*—About a two-thirds crop.

*Green Lake County, Wis.*—Condition remarkably good.

*Green County, Wis.*—Light crop in number of bushels, but No. 1 in quality.

*Wright County, Minn.*—Little more than half a crop; and severe rains within a few days past have done great injury to the grain stacks.

*Houston County, Minn.*—The yield is light, but of excellent quality.

*Carver County, Minn.*—Yield not as good as last year, but quality much superior.

*Ramsey County, Minn.*—Lighter crop than was anticipated, but quality splendid.

*Fillmore County, Minn.*—Wheat was harvested in first-rate condition, also oats, barley, and rye.

*Wabasha County, Minn.*—The crop was cut and stacked in the best



possible condition, but the great rain of 22d August materially damaged it.

*Goodhue County, Minn.*—Excellent in quality.

*Washington County, Iowa.*—Superior in quality.

*Dubuque County, Iowa.*—Remarkably good; best ever raised in the county.

*Benton County, Iowa.*—Wheat was harvested in excellent condition.

*Des Moines County, Iowa.*—The yield averages about seven and one-half bushels per acre, and the harvest was the earliest known for thirty years. The drought has been unequaled since 1857, when there was a good crop of wheat, though harvested very late.

*Taylor County, Iowa.*—A fair crop, and of fine quality.

*Iowa County, Iowa.*—The crop is less than average, but superior in quality.

*Hardin County, Iowa.*—A short crop, but of good quality.

*Clinton County, Iowa.*—Owing to continued drought since the early part of spring, wheat, oats, barley, rye, &c., gave a small yield, and the straw was short; but the grain was of very good quality.

*Muscatine County, Iowa.*—A light crop, but of unusually good quality.

*Montgomery County, Iowa.*—An average crop; the grain very fine and plump; wheat has been stacked in fine order.

*Hancock County, Iowa.*—A better crop than was expected, and of excellent quality.

*Clayton County, Iowa.*—The yield is 12 to 15 bushels per acre, of excellent quality.

*Floyd County, Iowa.*—Owing to drought the crop is a light one; not more than half of last year's extraordinary product.

*Cherokee County, Iowa.*—The average yield on old ground is about 11 bushels per acre; on new ground, 5 bushels.

*Appanoose County, Iowa.*—A light crop, but of excellent quality.

*Page County, Iowa.*—Spring wheat averages about 13 bushels per acre; fall wheat, drilled, 20 to 25 bushels.

*Cherokee County, Kans.*—Wheat will not average more than 11½ bushels per acre. The heavy fall of rain which closed the severe drought was followed by ten days of damp weather, and much wheat has been spoiled in stack.

*Nemaha County, Kans.*—Grain was stacked in good condition. The crop is an average in quantity, and of superior quality.

*Morris County, Kans.*—Winter wheat averages 20 bushels per acre of superior quality; twice the usual breadth will be sown this fall.

*Coffee County, Kans.*—Winter wheat is an average crop, and more than average in quality. Much wheat and other grain has been damaged in stack by heavy rains in August.

*Wilson County, Kans.*—Wheat averages 63 pounds to the bushel.

*Leavenworth County, Kans.*—The crop is excellent; better than for many years. Stacking is over and thrashing is in progress; the weather very fine.

*Butler County, Kans.*—The yield is not as great as was expected, but the quality is very good.

*Wyandotte County, Kans.*—Wheat was harvested without rain, and is of very superior quality.

*Jefferson County, Nebr.*—A fair crop, though a lighter one than last year.

*Cuming County, Nebr.*—The yield is of superior quality, and on well cultivated land will be equal in quantity to that of last year.

*Lancaster County, Nebr.*—Small grains prove a very light crop, owing to excessive drought in June and July.

*Red River County, Tex.*—The Tappahannock makes 16 bushels per acre; other wheat, about 10 bushels.

*San Diego County, Cal.*—Wheat, as well as other grain, is almost a total failure, nearly all the crop being cut as hay.

*Stanislaus County, Cal.*—The crop falls considerably below anticipation; thousands of acres will not be harvested. The wheat crop of the county is about 425,600 bushels, against 1,000,000 bushels in 1869.

*Santa Clara County, Cal.*—On land affected by drought the crop will be quite light, the grain small, and much of it shrunk. On land of opposite character the yield will be average in quantity and quality.

*Alameda County, Cal.*—Wheat, barley, and oats will not be more than three-fourths of the average crops, although the grain is very plump and fine.

*Mendocino County, Cal.*—The main crop of wheat is quite one-fifth above an average, but that sown late turns out poorly, owing to the dry season having commenced earlier than usual.

*Linn County, Oreg.*—The acreage is probably one-sixth larger than that of last year; the yield not as good. The extreme heat of July and August caused a slight shriveling of the grain. Wheat being a staple hog feed in this State, its increased value will cause a falling off in the pork supply.

*Douglas County, Oreg.*—Wheat gave excellent promise in May and June, which has now been disappointed, the grain failing to fill on account of drought in July and August.

*Columbia County, Oreg.*—Winter wheat is plump, spring wheat shriveled, being damaged one-tenth by this cause.

*Marion County, Oreg.*—Late grain is not heavy, but the quality of product in general is good. It is being saved in good condition, and commands \$1 to \$1 15 per bushel at warehouses on the river.

*Utah County, Utah.*—Wheat, which looked well at harvesting, turns out poorly on being thrashed.

*Washington County, Utah.*—The heaviest crop obtained for several years.

*Yankton County, Dak.*—The quality is much better than that of last year.

#### HAY, PASTURAGE, ETC.

*Androscoggin County, Me.*—Light hay crop.

*Waldo County, Me.*—Pastures suffering from drought.

*Sullivan County, N. H.*—Hay product estimated at about three-quarters of a crop.

*Hampden County, Mass.*—Pasturage dried up.

*Berkshire County, Mass.*—Hay crop about one-third short.

*Plymouth County, Mass.*—Pastures nearly all dried up.

*Worcester County, Mass.*—Very dry pastures.

*Tolland County, Conn.*—Hay is worth \$35 a ton.

*Wayne County, N. Y.*—About one-third of a crop of hay.

*Delaware County, N. Y.*—Pastures deficient.

*Jefferson County, N. Y.*—Pastures look as if burned over. Unless there is sufficient rain soon there will be no fall feed.

*Madison County, N. Y.*—Hay less in quantity, but of better quality than last year.

*Essex County, N. Y.*—About half a crop of hay.

*Westchester County, N. Y.*—Pastures dried up.

*Hudson County, N. J.*—Hay crop very large and harvested in good condition.

*Washington County, Pa.*—The wet weather has damaged about one-sixth of the timothy hay crop.

*Beaver County, Pa.*—Pastures very good.

*Baltimore County, Md.*—The hay crop was never more abundant.

*Nelson County, Va.*—Very little clover saved without damage.

*Amelia County, Va.*—Pastures drying up.

*Alleghany County, N. C.*—Hay seriously damaged.

*Montgomery County, Tenn.*—Comparatively little hay saved.

*Robertson County, Tenn.*—Pastures are rich and tender and very fine for fattening beef cattle, and bringing up all stock in fine condition to go into winter quarters.

*Coffee County, Tenn.*—Hay much damaged in the shock.

*Giles County, Tenn.*—Pastures luxuriant, but not sufficiently nutritious to fatten stock.

*Greene County, Tenn.*—Pastures unusually good.

*Monongalia County, W. Va.*—Fall pasturage excellent.

*Webster County, W. Va.*—The grass crop considerably above the average.

*Mineral County, W. Va.*—The second growth of grass on meadows destroyed by grasshoppers.

*Oldham County, Ky.*—Grass fine all the season.

*Gallatin County, Ky.*—Pastures parched by dry weather.

*Spencer County, Ky.*—Abundant fall grass.

*Butler County, Ky.*—A large crop of hay, but damaged in harvesting.

*Henry County, Ky.*—Pastures parched to death.

*Ohio County, Ind.*—Pastures are all dried up; drought still continues.

*Jefferson County, Ind.*—Hay is a very short crop.

*Wayne County, Ind.*—A severe and prolonged drought; pastures are all dead.

*Putnam County, Ind.*—Hay is a very short crop, but of excellent quality.

*Warren County, Ind.*—Fall pasture is doing well; but there is a scarcity of stock water in many places.

*Cedar County, Mo.*—Hay crop severely injured by drought.

*St. Francois County, Mo.*—Hay crop almost a total failure.

*Moniteau County, Mo.*—The army-worm is injuring the crab grass and the meadows.

*Lincoln County, Mo.*—The army-worm is cleaning up our pastures.

*Jefferson County, Mo.*—Hay light; pastures poor.

*Chariton County, Mo.*—Fall pastures excellent.

*Adair County, Mo.*—Hay crop very light.

*Clay County, Mo.*—Fall grass will be fine.

*Vernon County, Mo.*—Many meadows entirely dried up and being plowed.

*Pope County, Ill.*—The army-worms are eating out the pastures, and will perhaps delay the seeding of wheat.

*Lafayette County, Ill.*—The hay crop was short.

*Cook County, Ill.*—The hay crop shortened by the drought.

*Meigs County, Ohio.*—Pasture is short.

*Franklin County, Ohio.*—Notwithstanding the drought our clay-land pastures are good, and stock is doing tolerably well.

*Lake County, Ohio.*—Hay of all kinds was gathered in bad order, being imperfectly cured.



*Harrison County, Ohio.*—The hay crop was very large, but somewhat injured by rains.

*Erie County, Ohio.*—Pasture is very good, and stock in fine order.

*Columbiana County, Ohio.*—Frequent rains; fall pasture abundant, and almost as fresh as in May.

*Ionia County, Mich.*—All hay that was secured seasonably is in fine condition.

*Marquette County, Wis.*—Timothy and clover injured by drought, but marsh hay heavy and of good quality.

*Richland County, Wis.*—Fall feed is first-rate.

*Green County, Wis.*—Pastures better than at any time this season.

*Rock County, Wis.*—Much of the deficiency in hay will be supplied by corn fodder and Hungarian millet.

*Walworth County, Wis.*—The hay crop is very deficient, but will be helped out by the superior quality of straw, and a large amount of pasture and corn stalks.

*Brown County, Wis.*—The hay crop is not over seven-tenths of last year's yield; much injured by rain.

*Sac County, Iowa.*—Timothy has been sown here only three or four years. It does exceedingly well, yielding one and one-half to two tons per acre. The dependence of feeders is mostly on wild hay, of which there is always plenty.

*Des Moines County, Iowa.*—The drought has been unequaled since 1857. On the 20th of July, in one section of the county, the people were feeding cows as in winter, the pastures looking as bare as in that season.

*Muscatine County, Iowa.*—Timothy yields about three-quarters of a ton per acre, of superior quality.

*Cedar County, Iowa.*—Pasture has greatly revived under the effect of heavy rains.

*Floyd County, Iowa.*—The crop of tame grass was light; a large amount of wild hay was made.

*Miami County, Kans.*—Owing to late rains fall pasture will be good.

*Shawnee County, Kans.*—Pasture is better than it has been for several years.

*Coffee County, Kans.*—Considerable hay damaged by August rains.

*Leavenworth County, Kans.*—The grass crop is excellent.

*Utah County, Utah.*—Hay is short, owing to drought.

*Lane County, Oreg.*—The hay crop is above an average.

*Linn County, Oreg.*—The hay crop is excellent and saved in good condition.

#### RYE, OATS, BARLEY, BUCKWHEAT, POTATOES, ETC.

*Aroostook County, Me.*—Buckwheat never promised better.

*Hillsborough County, N. H.*—An inferior crop of potatoes.

*Orange County, Vt.*—Potatoes and turnips need rain.

*Essex County, Vt.*—The month has been unfavorable for all crops.

*Orleans County, Vt.*—Buckwheat more or less blighted by drought.

*Wayne County, N. Y.*—About one-third of a crop of oats and barley.

*Erie County, N. Y.*—Bountiful crops generally.

*Monroe County, N. Y.*—Large quantities of hops are raised in this county. The crop is greatly injured by insects; not more than half a crop compared with former years.

*Wyoming County, N. Y.* Oats injured considerably by grasshoppers.

*Clinton County, N. Y.*—Potatoes will prove a short crop.

*Schoharie County, N. Y.*—Hops very light.

*Mercer County, N. J.*—A good prospect for a fine crop of buckwheat.

*Hunterdon County, N. J.*—Buckwheat damaged by drought.

*Atlantic County, N. J.*—The potato crop will be nearly a failure.

*Hudson County, N. J.*—Everything, except potatoes, has succeeded well.

*Lebanon County, Pa.*—Oats are somewhat more than an average crop.

*Washington County, Pa.*—Grasshoppers in many places have cut off one-fourth of the oat crop.

*Warren County, Pa.*—Potatoes were never better.

*Butler County, Pa.*—Oats are the heaviest crop since 1839; a large area sown. Rye is about three-quarters of a crop.

*Perry County, Pa.*—Rye is about an average crop; oats more than an average.

*Baltimore County, Md.*—An excellent crop of oats.

*Augusta County, Va.*—The oat crop is probably the best that has been harvested for twenty years. Potato crop excellent in quality and yield.

*Pulaski County, Va.*—Oats were never a better crop.

*Surry County, Va.*—More than half of the potato crop will be lost by the rot.

*Nelson County, Va.*—The oat crop seriously damaged by protracted rains.

*Fairfax County, Va.*—Oats not up to expectations.

*Henrico County, Va.*—All early crops very good, all late ones very bad.

*Wythe County, Va.*—Oats injured by the wet weather.

*Tazewell County, Va.*—The best season for corn, grass, and oats ever known in the county.

*Gloucester County, Va.*—Potatoes an entire failure.

*Nansemond County, Va.*—There are many truck crops raised in the county. Peanuts to the extent of about 600 acres; the crop at present appears well where a good stand was obtained; it may, however, with other crops, be very much injured by dry weather, which at the present time threatens a severe drought.

*Alleghany County, N. C.*—Oats seriously damaged by rains.

*Wilkes County, N. C.*—The prices of corn, wheat, and rye will about range with those of 1860.

*Alamance County, N. C.*—The most bountiful crops generally since 1852.

*New Hanover County, N. C.*—Peanuts are extensively cultivated in this county, and the crop is promising, say twenty per cent. over an average.

*Obion County, N. C.*—Broom corn is very fine and is becoming a considerable crop, and is paying very large profits.

*Davidson County, N. C.*—Oats are a better crop than for several years.

*Forsyth County, Ga.*—All crops are superior to those of last year.

*Murray County, Ga.*—Crops in this county and throughout Northern Georgia have never been surpassed.

*Rapides Parish, La.*—Sugar cane about 35 to 40 per cent. better than at this date last year.

*St. Mary's Parish, La.*—The season has been very favorable for the sugar cane.

*Plaquemine Parish, La.*—Rice crop being harvested with a fair prospect of an average yield. Sugar cane promising.

*Cameron County, Tex.*—Cane in good condition. Many have planted to get seed.

*Knox County, Tenn.*—Some experiments are being made in the cultivation of hops, thus far with success.



*Perry County, Tenn.*—On account of damaged seeds, peanuts will be short one-third. The crop will amount to 100,000 bushels, 50,000 less than last year.

*Montgomery County, Tenn.*—Oat crop rank and badly drifted. Good crop of potatoes.

*Coffee County, Tenn.*—Oats damaged by the wet weather.

*Fayette County, Tenn.*—Abundant crops of early oats and Irish potatoes; late sorts not so good but promise well.

*Lewis County, W. Va.*—Oats were an excellent crop, and were harvested in good condition.

*Braxton County, W. Va.*—Crops generally are good, and farmers are much encouraged.

*Webster County, W. Va.*—The oat crop is considerably above the average.

*Preston County, W. Va.*—Potatoes are in fine condition.

*Jefferson County, W. Va.*—There will be an abundant yield of hops.

*Wharton County, Tex.*—The acreage in sugar cane is annually increasing, on account of the destruction of cotton by the worm the last seven years. The crop promises well.

*Bureau County, Ill.*—Oats are a short crop.

*Stephenson County, Ill.*—Potatoes never so poor.

*Lee County, Ill.*—Late potatoes are nearly or quite a failure from dry weather and bugs.

*McHenry County, Ill.*—Early potatoes greatly injured by drought.

*Boone County, Ill.*—Oats, quality poor, and not half a crop. Potatoes not enough for home consumption.

*Putnam County, Ill.*—Smaller crop of potatoes than we have had in ten years.

*Cass County, Ill.*—The Early Rose potato has succeeded well. Very fine ones are now selling at \$1 per bushel. The early varieties will be our principal dependence for winter use.

*Ford County, Ill.*—More than usual flax was sown, and will pay as well as anything this season. A larger breadth than usual of broom corn was planted, and promises a good crop. Double the usual amount of sorghum was planted last spring, and bids fair for a good crop.

*Williamson County, Ill.*—The oat crop is better than for many years.

*Lawrence County, Ill.*—Oats are a good crop.

*Livingston County, Ill.*—Oats are half a crop.

*Putnam County, Ill.*—Oats are not half a crop.

*Henderson County, Ill.*—Rye is thin on the ground, the grain excellent. Oats are light in weight, and the straw short.

*Montgomery County, Ind.*—The potato crop has been cut short by drought; cabbage is rotting, but not so badly as last year. The rot proceeds up the stalk to the center of the head. Many evergreens are dying.

*Ohio County, Ind.*—Buckwheat is nearly a failure. Late potatoes are nearly ruined by the drought.

*Benton County, Ind.*—Oats will probably be more than an average crop.

*Jefferson County, Ind.*—Oats are a very short crop.

*Steuben County, Ind.*—Potatoes will not be more than half a crop.

*Morrow County, Ohio.*—Irish potatoes planted early give a fair yield; late planted are cut short by drought, in many localities being scarcely worth digging. The sorghum crop is also shortened by drought.

*Greene County, Ohio.*—Buckwheat will be almost a failure, on account of drought.

*Washington County, Ohio.*—Potatoes, both early and late planted, have been injured by drought.

*Noble County, Ohio.*—Oats are a better crop than last year, and of good quality.

*Ashland County, Ohio.*—Potatoes are the only crop which will fall short.

*Jefferson County, Ohio.*—The yield of broom corn is very good. This crop has become of some importance here.

*Marion County, Ohio.*—Sorghum is seriously injured by drought.

*Bay County, Mich.*—Barley has been injured by continuous rains in June and July; also, potatoes on low lands to some extent. Farming lands in this county are very level and need a large amount of under-draining to make them profitable.

*Ionia County, Mich.*—Hops received little care; the crop is light, many fields being abandoned.

*Lapeer County, Mich.*—Oats are very heavy, and in some places badly lodged.

*Branch County, Mich.*—Buckwheat is considerably injured by drought.

*Calhoun County, Mich.*—Hops have generally been abandoned as a crop in this county.

*Washtenaw County, Mich.*—Oats are a good crop in quantity and quality.

*Walworth County, Wis.*—Oats are not over two-fifths of an average crop, and inferior in quality. Barley about three-tenths of an average crop, and medium in quality. Potatoes are nearly a total failure.

*Brown County, Wis.*—Grain harvested since August 15 has been much injured by frequent and heavy rains.

*Inman County, Wis.*—Hops are cultivated in this county extensively. They have been badly injured by a new species of hop-worm, which commences its ravages as soon as the vine begins to climb, and continues till the time of blossom. Some yards are nearly destroyed, and all are injured. Only half an average crop is expected. Wild cranberries are an important crop in this county; the product is one-third larger than last year, and 6,000 to 10,000 bushels will be marketed in this county. About 6,000 bushels of blueberries and huckleberries, mostly picked by Indians, have been marketed. Price 6 cents per quart.

*Milwaukee County, Wis.*—The potato crop is very nearly a failure. All but very early varieties totally destroyed by the potato bug.

*Dane County, Wis.*—The amount of acreage in hops has greatly decreased since 1867-'68, and the acreage is now probably not more than one-third of the maximum amount at that period.

*Waushara County, Wis.*—The yield of rye is very deficient, but the quality good. Hops are in fair condition.

*Washington County, Wis.*—Rye is a poor crop.

*Marquette County, Wis.*—Potatoes are very poor.

*Green Lake County, Wis.*—Oats light.

*Jefferson County, Wis.*—Hops are doing well. The acreage is not more than one-half that of former years.

*Olmsted County, Minn.*—A hail-storm on the 14th of July destroyed a large quantity of grain in this county.

*Watonican County, Minn.*—Potatoes are a failure.

*Wright County, Minn.*—The severe drought has affected crops of all kinds. Oats are not half a crop.

*Ramsey County, Minn.*—Oats are seven-tenths of a crop.

*Washington County, Iowa.*—Abundant rains in August have greatly helped late potatoes, many corn-fields, and pastures.

*Taylor County, Iowa.*—Potatoes are a failure on account of the July drought. Rains are improving very late crops.

*Lee County, Iowa.*—Potatoes have received very great advantage from rains of August 2 and subsequent dates.

*Benton County, Iowa.*—Oats and barley were never harvested in better condition.

*Des Moines County, Iowa.*—The yield of oats ranges from 20 to 25 bushels per acre; barley averages about 16 bushels per acre.

*Muscatine County, Iowa.*—Rye and barley are light crops, but of superior quality. Oats are a failure, yielding only about 12 bushels per acre, weighing 27 pounds per bushel. Potatoes are a failure. Beans are dried up. Sorghum is thin on the ground.

*Clayton County, Iowa.*—Oats average about 22 bushels per acre; an unusually poor crop.

*Story County, Iowa.*—Potatoes are almost a failure.

*Floyd County, Iowa.*—Oats are a light crop, and potatoes almost an entire failure.

*Montgomery County, Iowa.*—Rains in August have given a start and rapid growth to crops.

*Crawford County, Iowa.*—The yield of oats and other grains is not over seven-tenths of last year's crop, but the quality is excellent.

*Cherokee County, Kans.*—Owing to introduction of new varieties, the crop of oats is above the average, reaching 33 bushels per acre. Potatoes cannot exceed half a crop, on account of drought and potato bugs.

*Nehama County, Kans.*—Dairy products are increasing, and are improving in quality.

*Leavenworth County, Kans.*—Recent rains have revived potatoes, and they will make a fair crop. Oats will make a good yield.

*Wilson County, Kans.*—Oats are nearly a failure in consequence of drought in the first part of the season.

*Butler County, Kans.*—Potatoes have done well. The earliest varieties are found best suited to this climate. The crop should be made by the 1st of July, before very hot weather sets in.

*Merrick County, Nebr.*—No rain from May 20 to August 11, (except for a few moments on July 16.)

*Douglas County, Nebr.*—Small grain has been somewhat lessened in weight by drought, but has been harvested in fine condition.

*Otoe County, Nebr.*—Frequent light showers during August have greatly benefited late crops. Potatoes, sweet potatoes, and cabbage, which promised to be failures, have revived, and will yield about an average crop.

*Lancaster County, Nebr.*—Potatoes will be an average crop.

*Douglas County, Colo.*—The extreme drought has injured crops on all lands not irrigated by streams from the Snow Range.

*Weld County, Colo.*—This is the driest season since 1863; but the facilities for irrigation have been so much increased that crops in general are good.

*Lewis and Clarke County, Mont.*—Crops have been much injured by heavy frosts during August.

*Utah County, Utah.*—Barley and oats turn out poorly at thrashing; potatoes will probably be not more than half a crop. All crops are injured by grasshoppers.

*Iron County, Utah.*—In some parts of the county potatoes are seriously injured by blight, while in other parts the crop is excellent.

*Hall County, Nev.*—The drought has been extraordinary, but taking crops in general they are better than they were last year.



*Alameda County, Cal.*—The beet crop is looking well throughout this section.

*San Diego County, Cal.*—Oats and barley nearly a total failure, the crop being chiefly cut for hay. The wool clip is light, owing to bad condition of sheep.

*Stanislaus County, Cal.*—The barley crop of the county is about 201,000 bushels.

*Linn County, Oreg.*—Oats are better than ever before; the bean crop is not one-quarter as good as formerly.

*Douglas County, Oreg.*—Potatoes will be very scarce and high, unless rain is soon had.

#### THE POTATO BUG.

*Monmouth County, N. J.*—Potato worms have been very destructive in a portion of the county; they have destroyed the leaves of all the vines for a distance of six to ten miles in every direction around Freehold; some fields destroyed in two days.

*Brooke County, W. Va.*—Potatoes greatly injured by the bugs.

*Cook County, Ill.*—The potato bugs have nearly destroyed our potato crop.

*McHenry County, Ill.*—The bugs have nearly ruined late potatoes.

*Winnebago County, Ill.*—The bugs have nearly destroyed the potatoes, and are now at work on tomatoes.

*Cass County, Ill.*—The potato bug has nearly destroyed our late potatoes.

*Kendall County, Ill.*—Potato bugs are making sad havoc in many fields.

*Lawrence County, Ill.*—Potato bugs unusually plenty, but came late in the season.

*Sangamon County, Ill.*—The bugs—first the Colorado beetle, and then *Cantharis vittata*—have seriously damaged our potatoes.

*Edwards County, Ill.*—The potato bugs, both kinds, have been very destructive.

*Ford County, Ill.*—Potato bugs are doing their yearly work, on the late planted vines especially, and will cause a short crop.

*Madison County, Ill.*—Late potatoes suffer severely on account of the Colorado bugs.

*Howard County, Ind.*—Potatoes promised well, but are badly injured by *Doryphora decemlineata*.

*Scott County, Ind.*—Great damage done by the potato bug.

*Ripley County, Ind.*—Potatoes nearly destroyed by the Colorado bug.

*Delaware County, Ind.*—Potatoes almost a total failure from drought and the potato bugs.

*Lagrange County, Ind.*—Three-quarters of the potato crop has been destroyed by bugs.

*Martin County, Ind.*—The potato crop would have been unusually large had it not been greatly lessened by bugs, of which there are three kinds: the black with white stripe, the brown, and the Colorado.

*Marion County, Ind.*—Potatoes are almost all destroyed by the Colorado bug, excepting early varieties, planted early.

*Mercer County, Ohio.*—Potatoes will be ruined by bugs.

*Noble County, Ohio.*—Potatoes are likely to be greatly injured by the bugs.

*Athens County, Ohio.*—Potatoes will be cut short by the long seven-lined bug. The Colorado bug has not appeared here.

*Berrien County, Mich.*—Potatoes are a failure in consequence of drought and the bugs.

*St. Joseph County, Mich.*—The potato is greatly shortened by the Colorado bug.

*Hillsdale County, Mich.*—The potato crop looks well, except on sandy soils, where the bugs have in some cases destroyed the whole crop.

*Van Buren County, Mich.*—Considerable injury to potatoes by the striped bug.

*Jackson County, Mich.*—The potato bug has been very troublesome, but has been effectually fought with much labor, and the actual damage will not be great.

*Branch County, Mich.*—Quite one-half the crops will be destroyed by bugs.

*Calhoun County, Mich.*—Potatoes promised well, but have been badly injured by the Colorado bug.

*Monroe County, Wis.*—Potatoes have been almost destroyed by bugs, except Early Rose and Wisconsin Peach Blow, which were out of the way before the bugs appeared in force.

*Walworth County, Wis.*—Potatoes are nearly a failure in consequence of drought and the potato bug.

*Waushara County, Wis.*—Potatoes are badly infested by bugs, yet appear in tolerable condition.

*Outagamie County, Wis.*—Potato bugs were very numerous; but Paris green, mixed with ten times its proportion of flour, has proved a specific against them.

*Fond du Lac County, Wis.*—The bugs have been kept off by free use of Paris green.

*Washington County, Wis.*—The potato crop is reduced one-half by the Colorado bug.

*Dane County, Wis.*—The Colorado bug has been more destructive than in any previous year; has been here five years.

*Ozaukee County, Wis.*—The potato bugs have eaten half the potato crop; the whole country is swarming with them.

*Dakota County, Minn.*—Potatoes about used up by the bugs. Will not have a half crop.

*Olmsted County, Minn.*—The potato bug has nearly destroyed the crop in this county.

*Goodhue County, Minn.*—Potatoes damaged worse than ever by the Colorado bug.

*Dakota County, Minn.*—The potato crop was very light, owing to drought. The potato bug was kept off by the application of Paris green mixed with flour, in the proportion of one part of the former to thirty of the latter.

*Houston County, Minn.*—Potatoes are almost a total failure on account of the bugs. These are very numerous, and are now eating the tomatoes, root and branch.

*Freeborn County, Minn.*—Owing to drought and the potato bug, potatoes will not be more than half a crop.

*Palo Alto County, Iowa.*—Potatoes will be a short crop on account of drought and bugs.

*Lincoln County, Nev.*—The acreage in potatoes was larger than usual, but a great part of the crop has been destroyed by insects. Enough will be left for home consumption.

#### TOBACCO.

*Prince George's County, Md.*—Crop materially affected by the drought.

*Buckingham County, Va.*—The average yield has been reduced at least one-tenth.

*Henry County, Va.*—Never so good before.

*Rockingham County, Va.*—An excellent crop.

*Henry County, Va.*—Better than it has been for five years.

*Columbus County, N. C.*—There is a material increase of acreage.

*Davis County, N. C.*—More planted than ever. The crop promising.

*Montgomery County, Tenn.*—Very uneven; some crops good, others failures. Many crops already cut prematurely on account of wet weather.

*Robertson County, Tenn.*—On account of excessive rains the crop has been pushed forward too fast to make a heavy and rich article, though the leaf is of fine length and breadth.

*Livingston County, Ky.*—More than an average planted, and prospects favorable.

*Callaway County, Ky.*—Heavy rains and worms have very much injured the crop.

*Henry County, Ky.*—A large breadth of land has been planted to tobacco, which promises well.

#### FRUIT.

*Piscataquis County, Me.*—Apple crop will be large.

*Sullivan County, N. H.*—The largest crop of apples for several years.

*Rockingham County, N. H.*—A good apple crop.

*Berkshire County, Mass.*—A better crop of apples than for several years.

*Norfolk County, Mass.*—Apples abundant.

*Essex County, Mass.*—The fruit crop will be large.

*Middlesex County, Conn.*—Apples abundant.

*Ulster County, N. Y.*—Apples falling off on account of dry weather.

*Columbia County, N. Y.*—The apple crop is large. Few peaches.

*Westchester County, N. Y.*—An abundant crop of apples.

*Niagara County, N. Y.*—The largest crop of apples ever raised in the county. Grapes abundant.

*Ontario County, N. Y.*—Grapes are ripening finely and large quantities are being sent to eastern markets. Good crop of apples; an inferior one of peaches.

*Passaic County, N. J.*—A good year for all kinds of fruit.

*Hunterdon County, N. J.*—The peach crop greatly damaged by the heat and drought.

*Burlington County, N. J.*—Apples and peaches much injured by insects.

*Franklin County, Pa.*—Apples, peaches, and grapes affected by the great heat of August.

*Warren County, Pa.*—A great crop of apples.

*Cecil County, Md.*—Apples are very defective—nearly all injured by worms.

*King George's County, Md.*—Apples abundant; peaches scarce.

*Nelson County, Va.*—Peach crop large, but many are rotting and falling off. Apple trees are well loaded.

*Fairfax County, Va.*—Apples and peaches are decaying on the trees.

*Buckingham County, Va.*—About three-tenths of the winter fruit has fallen from the trees.

*Norfolk County, Va.*—Peaches a total failure.

*Spottsylvania County, Va.*—Crop of peaches large, but they rot badly. Apple and pear crops very good.



*Franklin County, N. C.*—The wet weather will cause a failure of winter fruits.

*Le Noir County, N. C.*—Peaches rotting on the trees.

*Gaston County, N. C.*—All kinds maturing without blight.

*Davie County, N. C.*—A good crop of apples.

*Union County, S. C.*—Peach crop abundant, but fruit small.

*Towns County, Ga.*—Apples abundant.

*Talbot County, Ga.*—Peach crop almost an entire failure.

*Conecuh County, Ala.*—Fruit prospect not good.

*Cooper County, Miss.*—Apples and peaches almost an entire failure.

*Grenada County, Miss.*—Fruit crop nearly a failure, including grapes. The Scuppernong much the best.

*Avoyelles Parish, La.*—Peaches nearly a total failure.

*Bexar County, Tex.*—Grapes are ripe, the yield and flavor astonish every one. Germans say they never saw the most highly cultivated vineyards of the Rhine equal the product of this county.

*Houston County, Tex.*—Peach crop an entire failure on account of frosts. The apple crop is fine, and people are turning their attention more to raising them.

*Montgomery County, Tenn.*—Peach and apple crops fair. Peaches on the higher grounds have failed.

*Coffee County, Tenn.*—Apple crop a full crop; peaches a failure.

*Jefferson County, Tenn.*—Fruit crop very abundant.

*Monroe County, Tenn.*—Apples abundant, but rotting badly; peaches scarce.

*Fayette County, Tenn.*—Apples, in quantity, a fair yield, but defective. Peaches a total failure.

*Hawkins County, Tenn.*—Apple orchards generally have a large crop, but the fruit to a considerable extent is badly specked and falling from the trees.

*Preston County, W. Va.*—A fine crop of grapes.

*Tyler County, W. Va.*—Apples, peaches, and cherries seldom known to be so scarce.

*Brooke County, W. Va.*—Apples almost an entire failure; peaches not quite an average; grapes are in very good condition.

*Fayette County, Tex.*—Peaches an entire failure, owing to late frosts.

*Butler County, Ky.*—Apples abundant, and grapes better than ever I saw them in the county.

*Jefferson County, Ky.*—Very few peaches; pears, and some varieties of apples, very fine.

*Livingston County, Ky.*—Only a half crop of peaches.

*De Kalb County, Mo.*—Apples scarce.

*Cooper County, Mo.*—Apple and peach crops almost an entire failure.

*Osage County, Mo.*—Not more than one-sixth of an average crop of apples and peaches.

*Howard County, Mo.*—The apple crop is a failure; no pears, and only a few peaches.

*Dade County, Mo.*—Peaches and apples a failure.

*Adair County, Mo.*—Peaches abundant; apples few and very poor.

*Scott County, Mo.*—Peaches a failure this year.

*Holt County, Mo.*—Apples in good condition, but not one-tenth of a crop.

*Cape Girardeau County, Mo.*—Peaches entirely destroyed by early severe weather; other fruits generally escaped. Grapes suffering some from rot, but the crop is as large as usual.

*St. Francois County, Mo.*—No apples or peaches. But few grapes raised; quality good.

*Stoddard County, Mo.*—Very few apples or peaches.

*Cedar County, Mo.*—Half crops of apples and peaches.

*Springfield County, Ill.*—The grape crop is remarkably fine. Grapes and peaches have ripened much earlier than usual in this county this season.

*Pope County, Ill.*—More than one-half of the county has no peaches, and there is but a small crop in the remainder. Apples, hardly a half crop, and defective.

*Lafayette County, Ill.*—Peaches are abundant. The apple crop will not be an average one. Grapes are fine, but not in demand.

*Hancock County, Ill.*—The grape crop is superior.

*Livingston County, Ill.*—Apples, for the first time in the history of this section, are plentiful.

*Clay County, Ill.*—The largest crop of peaches and grapes ever raised in the county.

*Putnam County, Ill.*—Many apples falling on account of drought.

*Steuben County, Ind.*—The quality of apples was never better, but the crop is less than an average. The same with regard to peaches.

*Fayette County, Ind.*—Apples and peaches falling off.

*Montgomery County, Ind.*—Many peach trees are dying.

*Floyd County, Ind.*—Peaches are almost a failure. Summer and fall apples abundant; winter apples almost a failure.

*Allen County, Ind.*—Apples are not more than one-third of a crop.

*Wayne County, Ind.*—A severe drought. Fruit an entire failure.

*Vanderburgh County, Ind.*—Apples are about two-fifths of a crop, but an average in quality. Grapes are excellent in quantity and quality.

*Athens County, Ohio.*—Apples are gnarly and poor; the crop almost a failure. Grapes are in good condition, and more than an average crop.

*Meigs County, Ohio.*—The apple crop is knotty and wormy; not over one-tenth the amount of last year.

*Greene County, Ohio.*—Apples and peaches have fallen off greatly, and there is some rot among grapes. Pears are a very fair crop.

*Washington County, Ohio.*—Apples are nearly a failure.

*Noble County, Ohio.*—Apples and peaches are scarce and of poor quality.

*Ross County, Ohio.*—Abundance of grapes, but few apples and fewer peaches.

*Butler County, Ohio.*—Grapes are better than for the past five years.

*Marion County, Ohio.*—Apples, peaches, and grapes are seriously affected by drought. The latter crop promised well.

*Ionia County, Mich.*—Apples were never better, and there will be a large surplus. Not so with other fruit.

*Clinton County, Mich.*—An extra crop of cranberries.

*Branch County, Mich.*—Apples and peaches will be a short crop.

*Cathoun County, Mich.*—The apple crop is large and well grown, but peaches are scarce; grapes are fine, ripening being ten days in advance of last year. Delawares, Hartford Prolific, and Ives's Seedlings are gathered; Concord ripe; Rogers Hybrids 4 and 15, nearly so; Isabella and Clinton well colored.

*Van Buren County, Mich.*—Owing to drought there is very little fruit.

*Washtenaw County, Mich.*—Apples are fine and abundant; peaches and quinces a short crop; grapes superior.

*Marquette County, Wis.*—The crop is good.

*Ramsey County, Minn.*—About two-thirds of a crop.



*Taylor County, Iowa.*—The fruit crop was cut off by frost in April.

*Muscatine County, Iowa.*—Apples are falling from the trees to an unprecedented extent. The grape crop is good.

*Madison County, Iowa.*—Apples are almost an entire failure.

*Woodson County, Kans.*—Grapes are much above an average crop.

*Franklin County, Kans.*—The grape crop is good, though affected by mildew. Isabellas and Catawbias, which had been almost discarded as unprofitable, this year yielded bountifully, 50 per cent. more than Concord.

*Cherokee County, Kans.*—Fruit is chiefly ruined by late frosts. The country is new and most orchards have scarcely begun to bear.

*Franklin County, Kans.*—Notwithstanding the prolonged drought, grapes have again rotted, Concord and Clinton being injured as badly as Catawba and Isabella. Last year at the corresponding season it was exceedingly wet, and although Isabella and Catawba suffered, Concord and other varieties were free from rot or blight. The old theories do not appear to give a satisfactory explanation of this experience.

*Beaver County, Utah.*—Fruit was chiefly killed by late frosts.

*El Dorado County, Cal.*—Peaches started in the winter, and were frozen. Black Hamburg and Muscadine grapes have mildewed badly from some unknown cause.

*Lake County, Cal.*—The apple crop is not more than one-quarter of what it was last year; but, with the exception of the Red June, the quality is very superior.

*Tuolumne County, Cal.*—In many vineyards grapes have been injured by a late frost. Fruit crops of all kinds will be light.

*Plumas County, Cal.*—Late frosts nearly destroyed fruit. Some attention is being paid to cranberry culture.

*San Diego County, Cal.*—Fruit will fall short, excepting grapes, which will be nearly an average crop of fair quality.

*Los Angeles County, Cal.*—The season has been unusually dry and warm. The orange and lemon crop will be an average, and the trees are apparently well filled with the new crop.

*Lane County, Oreg.*—The apple crop will probably fall much below an average.

*Linn County, Oreg.*—There are few apples, and no peaches; and the plum crop is poor. The crop of grapes is the finest ever produced.

*Columbia County, Oreg.*—One-fifth of the apple crop was lost by being sun-burned.

*Benton County, Oreg.*—Apples are not more than half a crop.

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## EXTRACTS FROM CORRESPONDENCE.

### EXPERIMENTS WITH SEEDS.

*Chester County, Pa.*—We have just finished thrashing thirty kinds of oats. We find the late-ripening kinds do not weigh so well as the early. The straw is finely grown and clean of rust or disease, but the dry weather seems to diminish the meal. The Cape of Good Hope oats were small in size, but ripened very early. If they improve in stature, as some others have done, their earliness may make them valuable. Taking all things into consideration, we find the Excelsior the most valuable of the lot, very early, handsome, and heavy. Somerset and White Swedish come next in value. Among nearly all the new grains we find a disposition to adapt themselves to our climate. Some of the wheat that did poorly last year stood the winter better and gave promise of considerable

improvement, but the prolonged wet weather prevented all but the very earliest from filling well. The Tappahannock has been the most valuable wheat here among forty kinds this year, on account of its earliness. The wet did not injure it.

*Buckingham County, Va.*—I received from the Department of Agriculture one quart Arnautka Spring wheat. I sowed it broadcast, the 15th of March; the plat of ground being small, I put it in with a hand-rake, which left it so near the surface that a covey of crows attacked it, and destroyed about one-half before I discovered them. What was left grew off beautifully, and was harvested the 10th of July, yielding at the rate of about 25 bushels to the acre, of as pretty wheat as any raised in this county. I am satisfied that by sowing a little earlier it can be successfully grown in this latitude, and would prove a source of great benefit to tenant farmers, who seldom reach their new homes in the fall in time to sow winter wheat. The seed is already in great request; I shall give it my special attention next year.

*Dakota County, Minn.*—The package of barley (Saxonian) which I received from the Department has done exceedingly well; it fills well, and the berry is plump, and it stands the drought better than the common barley. The Tappahannock wheat which I received from the Department did not come up to my anticipations. It grew well, but when it came to fill out the heads were very small and the stalks barely able to hold up the heads.

*Butler County, Mo.*—I have just thrashed my Tappahannock wheat received from the Department. One-quarter of a bushel, sown the 12th of October, broadcast, made six and one-eighth bushels. It promises to do well here; ripens about ten days earlier than the wheat we have been raising.

*Lampasas County, Tex.*—The Tappahannock wheat sent me by the Department was turned over to Mr. Phil. Smith, an experienced and careful farmer. He sowed the same, and reports as follows: "Sowed the wheat (11 pounds) 3d of December, in drills sixteen inches apart. The wheat was injured by the rust. It was sowed six weeks later than the Red May, and was ten days later in harvesting. One peck was lost in thrashing. Yield, three bushels and one peck, weighing 193 pounds." Mr. Smith thinks it will be the wheat for this climate. He will sow the product early this fall.

*Fannin County, Tex.*—I have just thrashed the second crop of Tappahannock wheat received from the Department. I received one package and sowed it in November, 1868; thrashed  $2\frac{1}{2}$  bushels. Planted that in October, 1869, and thrashed  $7\frac{1}{2}$  bushels of indifferent wheat. It is liable to rust here. I will continue to try it, as we are very anxious for it to succeed.

*Tioga County, Pa.*—I received from the Department one-fourth of a bushel of Tappahannock wheat November 1, 1868. Sowed it November 3, which was about two months after the usual seeding time in this county. September 7, 1869, sowed four bushels on two acres. The early part of the winter being unfavorable, it was considerably injured. Cut July 5, 1870; yield,  $46\frac{1}{2}$  bushels. Sowed the same day in the same field four bushels of Blue Stem. Cut July 15; yield, 33 bushels. The straw of the Blue Stem was considerably heavier than the Tappahannock. The Tappahannock is ten days earlier than any other wheat grown in this county.

*Gilmer County, Ga.*—The Tappahannock wheat received from the Department, after two years' trial, proves to be well adapted to this section, yielding one-third more than other varieties on same land.

*Bedford County, Fla.*—The Tappahannock wheat sent last year was distributed in two-pound lots. Planted about 20th of October. Harvested last of April. Average yield, 80 pounds from each two pounds planted. Product every way equal in quality to seed planted. Its introduction has created a mania on the wheat subject. Many farmers have asked for lots, that they may experiment and get seed. I think it should be planted 1st of October.

*Shelby County, Ala.*—The Mediterranean wheat is decidedly the best wheat for the middle portion of this State. The two little bundles received from the Department were sown, and the product saved carefully and resown for three years, and we now have one hundred bushels in good condition, worth \$2 per bushel, while the common wheat brings but \$1 25 in the same market.

#### SOUTHERN KANSAS.

A correspondent writing from Girard, twenty-five miles south of Fort Scott, says: "Splendid farms are springing into existence all around us. This township, that three years ago could poll but forty votes, has now not a vacant quarter-section of land in its area of sixty-three square miles. This season has been remarkable for its adaptation to the wants of the farmers. Man, had he possessed power, could hardly have bettered it. Early in the spring we had rain enough to put the ground in good working order, and ample time to plow and put in crops, and after that showers every four or five days till the 3d of June; then eighteen clear days, (except one shower and a couple of "sprinklers,") just in time for wheat harvest; then four inches of rain to push the corn, followed by clear hot days while we harvested oats. With such a season, crops could not be other than good. Wheat and oats filled very well, and the crop is a good one, though much of the wheat was on sod and has short heads. Corn is now promising a large yield, and so are potatoes. Other vegetables are abundant."

#### EXPERIENCE WITH GRAPES.

*Springfield County, Ill.*—The grape crop is remarkably fine this season, Catawbas and Ionas particularly. Concords are excellent, but the vines are not as full as usual. July 25, Hartfords commenced coloring; July 29, Delawares commenced coloring; and by August the Hartfords were nearly all colored. August 1, Israella one-fourth colored; August 9, Salem, Allen, Concord, and Northern Muscadine coloring; August 10, Diana and Isabella coloring, the latter rotting some; August 12, Hartfords nearly all ripe. On the 15th of August we pulled for market the first Concord, Israella, and Delaware. August 18, Catawbas coloring. From the foregoing notes it will be seen that the ripening of grapes in this county is much earlier this season than usual. Peaches also have ripened earlier than usual, and the corn crop is much nearer maturity than is commonly the case at this date.

*Hancock County, Ill.*—The grape crop is the best that has been gathered since their introduction in this county. The vines have been free from insects, blight, rust, and mildew, and retain all the healthiness desirable up to the time of ripening. We estimate 1,200 to 1,600 acres in this county, averaging 500 vines to the acre, and each vine will average 10 pounds—making the enormous sum of 6,000,000 pounds, one fourth of which will be marketed for table use, the remainder made into wine. The Catawba, which has failed to give satisfaction for some years past,



has this year redeemed itself, being universally well filled with fine healthy grapes.

*Ripley County, Ind.*—The grape crop is a fair one, although there is some rot. Apple trees are affected by blight. In the south part of the State the ends of the limbs for five or six inches look as though they had been burned. Pear trees are suffering from fire blight to an alarming extent, there having been some signs of it last year. The varieties most affected are the Urbanist, (very badly,) Stevens's Genesee, Flemish Beauty, Vicar of Winkfield, Onondaga, Dearborn's Seedling, Beurré Diel, and Osband's Summer. Some trees will probably be lost, while the rest may be saved by cutting back to the sound wood. Bartlett's are but little affected.

*Rutherford County, Tenn.*—Further observation with the progress of the season show that the Concord grape, though a profuse bearer, will not do to rely upon. Upon very thin soil the fruit ripened up well and gave some fine bunches; on a fair soil the berries were larger, but the clusters were ragged and the fruit inferior. Hartford Prolific satisfactory. Catawba showed about ten per cent. rot; fruit excellent, and a good crop. Ives's Seedling, Norton's Virginia, and Maxatawney showed no sign of disease; crop good. Diana, Iona, and Creveling total failures.

#### GRASSHOPPERS IN MARYLAND.

*Cecil County, Md.*—The grasshoppers have been unusually destructive this summer, owing to the very dry weather in the early part of the season, which favored their rapid production and growth. They do not confine their depredations to grass, low bushes, &c., but attack large trees, stripping them of their foliage in an incredibly short space of time. Some of the finest pear trees in my orchard have been entirely defoliated by these pests, with the exception of a stray leaf here and there. My young cherry orchard has also suffered to a very appreciable extent, but I hope the injury to the trees this year will not materially injure their prospects for 1871.

#### LARGE YIELD OF SPRING WHEAT.

*Marshall County, Kans.*—A field of  $7\frac{1}{2}$  acres of spring wheat yielded  $234\frac{1}{2}$  bushels of good wheat, being very nearly  $31\frac{1}{3}$  bushels per acre. The field received no rain from the time the wheat was sown until it was thrashed.

#### FERTILIZERS IN THE SOUTH.

*Weemsboro, Ga.*—Thirty-three millions of pounds of guano have been transported over the Georgia railroads during the past season and for the present crops, and the low price of cotton has caused many long faces among our planters.

#### THE ALL-COTTON MANIA.

*Union County, S. C.*—There has not been enough corn planted in this county. When our farmers bring corn up to \$3 per bushel and cotton down to 8 cents per pound they will try to raise corn enough for home consumption.

*Butler County, Ga.*—I am pleased to report the corn crop 10 per cent. above that of last year, and I think there is a healthful public sentiment prevailing now to raise a full supply of the cereals for home consumption at least. The all-cotton mania is subsiding in this county.



A Georgia correspondent writes that the continued decline of cotton and the high price of provisions, compared with the prospective low price of cotton this fall, have settled the minds of many to plant less cotton hereafter. In such a policy only lies the true independence and prosperity of the South.

*Liberty County, Fla.*—As all other business is neglected for cotton, it seems as if the science of making the latter will be brought to perfection. Where we formerly made 1,000 pounds of seed cotton per acre, 2,000 pounds are now considered a moderate crop; and I verily believe that, with some of the fertilizers and the skill in culture already attained, 3,000 pounds will soon be the average crop of Florida. As an instance of the care taken in making cotton, I remark that a blacksmith planted 10 acres, and his wagon-tire needed repair, and, in place of his doing it himself, he sent his son with it ten miles to another workman.

#### SEA ISLAND COTTON IN TEXAS.

A correspondent at Galveston sends to the Department a remarkably fine specimen of Sea Island cotton, of which one planter in that quarter has 200 acres in cultivation. "No rains of consequence had fallen from the 15th of April to the 27th of July; although vegetation generally suffered, this cotton was not affected materially, and is remarkably thrifty; it is just beginning to open. The packing season is now at hand, and without any serious disaster from storms, continuous rains, or the ravages of the worm within the present month, a large crop will be gathered on our coast, perhaps a full average of 1,000 pounds of seed cotton to the acre. The staple is very fine, strong, and glossy, and is equal to any yield of previous years."

#### SUGAR IN LOUISIANA.

Grass worms have made their appearance on the plantations of Captain White, in Jausse Point, and Louis Grevenberg, below Jeanmerettes, on Bayou Teche, stripping the foliage from the cane in both cases. The latter reports his crop to be injured eighty hogsheads by their visitation. Reports are circulated of the appearance of this worm on other plantations, but of this we have been unable to obtain accurate information. Crops are all "laid by," and are generally in most excellent condition. Cane shades the ground, and rains are regular and frequent.

#### DISEASES AND CONDITION OF SWINE.

*Ickesburg, Perry County, Pa.*—A malignant disease prevails among some herds of swine in this vicinity. The affected animal refuses to eat, coughs, grows feeble; at length is unable to sustain itself on its hind legs; occasionally blotches appear on the skin. There is, in some cases, diarrhea; in others, costiveness; urine, small in quantity and highly colored; occasional vomiting; death occurs sometimes in less than an hour, in other cases not for several days. A post-mortem examination showed that one lung was highly inflamed and hepatized, the other slightly; one kidney too dark colored at one end; the heart quite soft; the butcher (an experienced one) says he never saw a carcass so destitute of blood, "there being no blood at any place, not even in or about the heart;" the meat had the natural appearance; no inflammation about the intestines, pleura, or windpipe.

The hogs were in pasture, with free access to fresh spring water im-

pregnated with lime. The same or a similar disease took off many hogs in this vicinity last fall and this spring. Numerous remedies have been applied, but none efficacious. It is probably the disease described by Dr. Snow in the *Agricultural Report* for 1861, p. 147.

*Wyoming County, N. Y.*—There are more pigs from one to five years old in the county than there have been for years.

*Montgomery County, Md.*—A fatal disease is prevalent among the hogs of this county, some farmers having lost nearly all. The symptoms are the reverse of cholera, viz., constipation of the bowels, great debility, stiffness of the jaws, and loss of appetite. The blood settles behind the ears, and it is attended with much coughing. What is the disease and what the remedy?

*Carroll County, Ga.*—The numbers of beeves and hogs are increasing.

*Richland County, S. C.*—The improved condition of hogs is due to fine pasturage.

*Leon County, Fla.*—Interest in hog raising is on the increase.

*Harris County, Tex.*—The pork crop will be short in consequence of the late frosts, which destroyed all the mast.

*Austin County, Tex.*—Hogs are in good condition.

*Crawford County, Ark.*—Hog crop is rather poor; not quite up to last year in size of hogs.

*Clark County, Ark.*—Hogs are dying all over the county, more on account of neglect than the prevalence of any particular disease.

*Prairie County, Ark.*—Hog production has increased, and is heavier than before the war.

*Johnson County, Tenn.*—Hog cholera has commenced its ravages; some farmers have lost their entire stock.

*Coffee County, Tenn.*—Some loss of hogs from disease.

*Sullivan County, Tenn.*—Hog cholera is raging in different localities; other stock healthy and in fine condition.

*Monroe County, Tenn.*—Hogs scarcer than for many years.

*Humphreys County, Tenn.*—Hogs dying of cholera.

*Fayette County, Tenn.*—Hog crop satisfactory.

*Henry County, Tenn.*—In a few localities hog cholera is prevailing.

*Henry County, Ky.*—Stock hogs are selling for 8 to 9 cents per pound, and are in great demand.

*Butler County, Ky.*—Hog cholera has plagued us, as usual.

*Spencer County, Ky.*—Hog cholera prevails in a section equal to one-fifth of the county.

*Lincoln County, Ky.*—We have the hog cholera and chicken cholera prevailing in portions of our county. No remedy has been found.

*Marion County, Ill.*—Stock hogs are high, worth 8 or 9 cents, gross.

*Edwards County, Ill.*—Not so much hog cholera as at the corresponding date last year.

*Boone County, Ill.*—Stock generally looking well, considering the extreme drought. Stock hogs very scarce.

*Clay County, Ill.*—We have more stock hogs than for several years, notwithstanding the cholera, which has appeared in some neighborhoods.

*Fountain County, Ind.*—Hogs are scarce, and, as feed is abundant, will probably command a good price from feeders.

*Marion County, Ind.*—Some hog cholera; the county is very rarely clear of it of late years.

*Dubois County, Ind.*—Many hogs have died with cholera.

*Harrison County, Ohio.*—Stock hogs are in great demand, selling at 10 cents per pound, gross weight.

*Ionia County, Mich.*—Corn being plentiful, the condition of hog stock is unusually good.

*Cass County, Mich.*—Hog cholera has appeared in several places, and if it spreads hogs will be marketed before they are full fed.

*Muscatine County, Iowa.*—Stock hogs are plentiful, but their condition is rather below average, owing to last year's corn crop being deficient in quantity and quality.

*Cowley County, Kans.*—The estimated increase in the number of hogs is 20 per cent.; yet there is not one-hundredth part of what is required by the demands of home consumption.

*Burleson County, Tex.*—Fewer hogs, according to population, than for the last twenty-five years.

### COMMISSIONER CAPRON'S ADDRESS.

The following address was delivered before the Montgomery County (Maryland) Agricultural Society, by Hon. Horace Capron, Commissioner of Agriculture, on the 14th instant, at Rockville, Maryland:

MR. PRESIDENT, FRIENDS, AND FELLOW-WORKERS IN THE ANCIENT ART OF AGRICULTURE: It is with no ordinary pleasure that I revisit a place which has become remarkable in the rural annals of Maryland for triumphs of progressive agriculture, for the results of the "high-pressure farming" decried by the Rip Van Winkles of twenty years ago. I see in the conspicuous signs of thrift, of high fertility, of heavy production, where once barrenness and desolation ruled the scene, "confirmations strong as proofs of holy writ," ocular and conclusive demonstrations, that you and I were right, and the "low-pressure" delvers in the old fields were wrong.

Thirty years ago these smiling fields, now green and luxuriant at the close of a summer of unusual severity, were dry and bare, the soil hard and intractable, its appearance indicative of that decay and decrepitude in which "the grasshoppers shall be a burden." Few at this day can accurately estimate the utter poverty of the land. A few representatives of those days, noble standard-bearers of the advance guard of improvement, whom I now see before me, will bear willing testimony to its worthlessness for agricultural purposes. A simple anecdote of that period may serve to illustrate its character: A well-known gentleman from the fine corn lands of Prince George's, commanding a troop of cavalry, passed with his company through a corn-field on one of these old farms, (the country roads of that period being only wagon tracks through the fields,) and observing one of his troopers bending over upon his horse and cutting right and left with his sabre, he demanded the cause of so strange and unsoldier-like a breach of discipline. "I am trying to reach the top of this corn," replied the investigating cavalry-man. He might now ride through the same fields and find it equally difficult to reach up to the top of the corn.

I feel a personal interest in these "old fields" and the story of their improvement. My first essay in their attempted renovation was in 1836, when I plowed fifty acres and sowed oats and clover, hoping through the agency of plaster of Paris to secure a setting of clover. The spring was favorable; the oats sprouted, as did the clover; a good sprinkling of plaster was applied, but not one sprig of clover ever grew, and the oats were harvested on the "grab system" then so common. For the benefit of young farmers, who are presumed not to understand this mode, I will explain: The cradler makes a sweep with his cradle, and as it rises out of the grain, he "grabs" it with the left hand, and lays it down carefully in a bunch to enable the binder following after to find it! In less than ten years these lands yielded 36 bushels of wheat per acre, 100 bushels of corn, and 2½ tons of hay; and the crops had paid the expense of improvement; while the value, estimated at \$10 per acre, had advanced to \$60, and stands to-day at double that sum, after large and profitable crops have been taken for so many years, at small expense for fertilizers.

Another tract, a swamp of sixty acres, which I succeeded in draining and improving, soon bore a heavy crop of timothy, and was permanently reclaimed, becoming, from an unsightly and unhealthy morass, a beautiful and productive meadow.

Amid doubting and criticism these improvements progressed, not at an enormous expense in the nature of a permanent investment, but paying their way in returns almost immediate, and at the same time permanently advancing the value of the property in a degree beyond the gross expense of the work. I thank God that I have lived to see



the renovation inaugurated in those days so general and so successful, especially in this neighborhood, and I feel a proud satisfaction in having borne an humble part in this work of causing two blades of grass to grow where but one grew before.

Memory recurs with pleasure to my first visit to this neighborhood in 1847, a visit made at the invitation of a few of the pioneers in its improvement, who desired me to witness the effect of this system for the restoration of "worn-out lands," then in its infancy, now the established means of fertility and wealth. It is a system of liberal feeding, in opposition to the plan of leaving the soil to improve itself. None of these men believed that an application of manure would "fire" the crop, as many did at that day, or that starvation could be cured by leaving the patient to the *vis medicatrix nature*.

The first remedial agents were lime, plaster, ashes, poudrette, bone dust, and guano, followed by the employment of all the restorative resources of an enriched soil, teeming with production, furnishing abundant and nutritious aliment for herds of thriving cattle, from which in turn increased supplies of fertilizers were obtained; and at the same time the grasses and clover, hitherto unknown in the vocabulary of the growers of tobacco and corn, were permitted to shade the soil from burning suns, to ramify it with their searching roots, areate it, and fit it for seizing upon, and storing for use, plant-food from the air above and the earth beneath.

With such means these men continued their experiments in renovation, hauling six horse loads of fertilizers ten miles over rough roads from the line of the Baltimore and Washington railroad. They had tried turning under green crops without fertilizers, but failed because the land was too poor to produce the needed material for green manuring. Innumerable are the experiments recorded in the journals of these gentlemen, some of which I have been kindly shown, which (did the limits prescribed myself in this address permit) could be quoted to sustain this—invidiously styled—high-pressure system for the restoration of these impoverished lands. In no case do I hear of failure where the land has been properly relieved of its superabundant moisture, thoroughly aerated, and liberally manured.

These efforts in Montgomery, Prince George's, and other counties, reports of which attracted so much attention in the public prints of that period, gave the first impulse which has wrought the magical change from "barren old fields" to the beautiful landscape which now surrounds you—a land groaning under the burden of agricultural wealth, the fairest portion of your State, and worthy to rank as an honor to the highest fertility and best culture in the Union.

Parallel with this enrichment of the soil ran the course of improvement in farm stock. Well do I remember the first exhibition of my own stock, at the Montgomery County Agricultural Society cattle show in 1848, when the president's seat was so ably filled by that noble-spirited and cultivated gentleman, Allen Bowie Davis. Here were the ponderous Durhams, the symmetrical Devons, with finest of horses and mules, exhibited by Messrs. Blagdon, Brown, Clark, Price, Gaither, and others; and an impetus was given to stock-breeding which has left an indelible impress upon the farm animals of Maryland, added to the general wealth and welfare, and materially aided in the work of renovating the worn-out lands of the State.

Since that period, and as a direct result of its impelling spirit of progress, roads have been improved, new avenues of trade and traffic have been opened, shortening the distance to market, and facilitating the transportation of products and the return of fertilizers, and trade generally enlarged by the increased ability of the farmer to purchase.

While you have added depth to your available soil, have greatly increased its productive capacity, ameliorating your heavy clays, draining your low lands, and making your agriculture more systematic, reliable, and profitable, I press upon your attention the fact that the ultimate aims of progress have not yet been reached. While your experiment has settled the question of a profitable renovation of waste lands, and furnished an example which should be followed throughout the South, until the one hundred million acres of old fields shall bloom in beauty, and bear a prolific burden for the sustenance of animal life, you should still remember that there are new fields, on which to surmount new difficulties, and win new triumphs. Your lands do not yet yield an average of 30 bushels of wheat, nor are your soils always sufficiently committed or perfectly drained; you may not have tried the experiment of applying one hundred dollars' worth of manure to the acre, as have the tobacco-growers and onion-raisers of the Connecticut Valley and Rhode Island, to their very great profit; your rotations may not always be arranged with sufficient exactness to the peculiar capacity and condition of the several sections of your farms; and you have yet to introduce steam as a cheap and efficient agent in the process of tillage, and in the various mechanical operations of the farm. These works of progress must be manfully encountered, and I predict that new lessons in rural economy and agricultural thrift will be taught by the farmers of this county.

Your example is of inestimable value to the Southern States, alive as they are to-day with agricultural activity, mental and muscular, and earnest in efforts to adapt their husbandry to the new circumstances which imperatively demand change in modes and

processes, in variety of crops and increase of industries, and especially in adopting labor-saving expedients and machines, and acquiring the mastery of the science of farm improvements and renovation. No longer should the planter be migratory, wasting field after field, and seeking new soils to devastate. Recuperation must take the place of destruction, and convenient farm buildings, roads, and other improvements will follow, and serve to foster local attachments and love of home, and to increase the general wealth and advance refinement, and promote the highest type of civilization.

Using their advantage of climate and soil, and following your example of diversifying agricultural industry, the South may yet produce the value of a hundred million dollars, now imported, and increase the industries of the country, the estimated value of which it would be impossible now to compute.

Our nation is entering upon a new era. With increase of area, giving the widest variety to soils and climate, accompanied with immigration from every quarter of the globe, it is daily becoming more a necessity of our condition that new industries should be inaugurated, and new products grown, new processes of utilization attempted, and attention be thus directed from those great industries pursued as specialties, as cotton, or wheat, or whatever promises to reduce the profit of labor by over-production, and which are always foes to scientific agriculture and real improvement.

We are paying tens of millions of dollars annually for fibers, oils, fruits, and other aliments, medicines, and dyes, which can readily be produced here, thus keeping our treasure at home, and giving rural labor a variety and range which will serve better than trades unions or any expedients of combination to keep up the price and improve the condition of the laborer, not alone the laborer upon the farm, but the worker in all the arts of mechanism and fabrication.

It is my earnest desire and deliberate purpose, in my official capacity, and through the Department of the government over which I have been called to preside, to co-operate with you, and with the friends of rural progress everywhere, in all efforts tending to the advancement of a scientific, systematic, rational and practical system of American agriculture, suited to our peculiar wants and circumstances, and not a servile copy of any foreign system, however advanced in its philosophy or valuable its results.

The Department of Agriculture is establishing relations with all organized representatives of agriculture, whether governmental or otherwise, making exchanges of seeds, plants, and publications; it is searching through the world for new and valuable plants to acclimatize, new varieties of cereals to test, and, when proved valuable, to distribute. It is stated on competent local authority that hundreds of thousands of bushels of oats are now grown in a single Western State from seed distributed a few years ago, greatly excelling the common seed in productiveness and in quality. Similar facts, showing an increase of millions of dollars in the production of the country, through the direct agency of the Department, are filed in its archives.

The Department embraces in its work the collection and dissemination of statistics and practical information; chemical analyses of whatever will throw new light upon the mooted questions of progressive agriculture; experimental horticulture, with illustrations of landscape gardening and rural adornment; entomology, with its myriad forms of life, either favorable or inimical to vegetation; botany, with a continental field but partially worked, and promising rich rewards. These and other objects of effort are ever before us, and I believe our working corps are not entirely devoid of appreciation of the importance of efficient service, and are making a good degree of progress in the great work.

In conclusion, allow me to express the pleasure I feel in greeting again my old friends; in witnessing the evidence of your skill and industry, your taste and judgment, your comfortable houses and your improving farms. You have made a desert to bloom as a rose; you have caused much grass to grow where literally none grew before, and are therefore doubly and peculiarly benefactors. Continue to advance; take no step backward; and turn not your backs, you or your children, on so honorable a pursuit, so healthy, and so conducive to virtue and true comfort, as that by which you have already wrought results so beneficial and so substantial.

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## SOUTHERN AGRICULTURAL CONGRESS.

A circular issued by a joint committee of the Cotton States Mechanics' and Agricultural Fair Association and the Augusta Board of Trade proposes to southern agriculturists the formation of a central organization or "agricultural congress," for the advancement of their interests, including the improvement of the labor system, the encouragement of foreign immigration, and the diversification of the agricultural products

of the South. The initiatory meeting of this general association is appointed at Augusta, Georgia, October 26, 1870, during the fair of the Cotton States Mechanics' and Agricultural Fair Association. State and county agricultural societies are invited to send delegates, and arrangements have been made with railroads to transport these delegates free of charge, or at reduced rates.

### THE COTTON CROP OF 1869.

The Charleston Courier makes the following statement concerning the crop of last year :

The summing up of the crop of 1869-'70, as shown by our statement, is 3,203,828 bales, an increase in production of 845,459 bales over 1868-'69. This increase has been mainly absorbed by European countries, as will be seen by the annexed comparative statement of foreign exports for the past two years :

	1869.	1870.
To Great Britain .....	989, 491	1, 478, 849
To France .....	224, 186	346, 430
To north of Europe, Spain, &c.....	233, 650	348, 844
Total .....	1, 447, 327	2, 174, 123
		1, 447, 327
Increase.....		726, 796

After making the necessary deductions there is left for home consumption, north and south, 964,642 bales. We have put down for southern consumption 112,000 bales, which includes 12,000 bales taken for consumption in Virginia, and counted in the exports from that State, leaving for northern consumption 852,842 bales, against 840,720 bales in 1869, showing an increase of 12,122 bales.

The value of the crop of the past year (1869-'70) may be put down in round numbers at \$325,000,000. This immense amount of money has been of incalculable benefit to the entire country.

The summing up of the crop, as developed in our statement, exceeds the estimates of the most sanguine in the early part of the past season from a half to three-quarters of a million of bales, which proves the utter fallacy of the many advance statements of growing crops which are heralded throughout Europe and the Northern States for the purpose of affecting prices. Such statements work great injury to the planter as well as to the buyer and consumer.

The disposition, so general on the part of producers, to depreciate the probable production of other crops as well as of cotton is ultimately an injury. "Honesty is the best policy" in marketing a crop. No sane man will make an unconditional estimate in the beginning of the season or until near its close. After the 1st of October, with the present acreage in cotton, an extremely favorable season may give a quarter or even a half million of bales above the average expectations; or a killing frost, unusually early, and bad weather thereafter, may cause an equal reduction. It is yet too early for any authority short of Omnipotence to tell within half a million bales what the present crop will be, even with a knowledge of the precise number and condition of the growing plants, or the exact acreage they occupy.

### IXTLE FIBER.

Mr. J. McLeod Murphy, of Harlem, New York, has sent to the Department of Agriculture a package of the dried leaves of this plant, (*Bromelia sylvestris*,) which grows abundantly on the southern shores of the Gulf of Mexico; also, a package of the fiber, remarkable for its luster,



strength, and flexibility, without kinking. Referring to a previous letter of his in the Monthly Report of the Department for May, 1869, (p. 232,) he says:

You will observe that inside of the thin envelope which forms the leaf there is a perfect skein of thread of extraordinary tenacity, length, and fineness. The removal of this outer covering or cuticle, when thus dried, can be readily done by a simple chemical process, and the whole fiber made immediately available without other expense. That you may form a better judgment of the plant, I send you also a sample of the fiber, (although of inferior quality, about second or third,) as extracted from the green leaf, (see my previous letter.) My idea is to use all the *refuse* leaves not employed for ropes or textile fabrics for paper stock, cured as shown in the sample, and baled like hay. As I stated in my previous communication, the ixtle plant, though differing widely from its kindred flora, requires but little cultivation, and the leaves, such as I send you, no other care than drying for a few days in the sun.

If a fine quality of paper for banking or other purposes can be made from skeins of thread, the question whether a similar result can be obtained from the ixtle plant is answered. This plant can be brought to New York in quantity for less than \$50 per ton. I state this fact, that it may be contrasted with the price of imported rags.

At all events, I desire to make this record in your Department, and to call attention to this most valuable vegetable product.

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### WHEAT IN SOUTH CAROLINA.

Lardner Gibbon, of Greenville, in the northwestern part of South Carolina, and at the foot of the Blue Ridge, writes to the Commissioner, date of July 27th, that the damage done to wheat last year by drought in that section caused a larger area than usual to be sown for the present season, and that the harvest has been abundant. He states that Greenville County is admirably adapted to the production of wheat. On a very imperfectly improved old broom-sedge field he has harvested this season 12 bushels of wheat per acre, which is only four-fifths of a bushel less than the average of Pennsylvania in 1868. Wheat is worth \$2 per bushel in Greenville, corn bringing \$1 70, and the facilities of transportation to the seaboard are such as to assure a good market at all seasons. He condemns the practice of planting wheat late, and on ground which has just been exhausted to a large extent by the corn crop, as such growth on impoverished land impairs the vitality of the wheat plant and renders it liable to smut; and the grain being late in forming, it is liable to rust from exposure to warm, sultry rains, which come on with the southwest winds prevalent in June. Wheat in that climate, if sown early, is in no danger of winter killing. The land should be plowed to a good depth in August or September, and the sowing done about the first of October. The roots then obtain a good hold upon the soil; and by top-dressing in mid-winter, with a moderate coat of barn-yard manure, the wheat receives a safe protection against the inclement weather which follows.

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### CHEESE PRODUCTION.

Mr. T. D. Curtis, of the Utica (New York) Herald, who is conversant with the dairy interest, writes to the Department in response to inquiry, that, "making allowance for old factories discontinued, we think that at least two hundred factories have been added to last year's number in this State alone. In Ohio, Illinois, Iowa, and Wisconsin, large numbers of new factories have opened this season. We have no accurate information as to the number, but it is the opinion of good judges that the

number of cheese factories in the country has been doubled this year. The number of cows, however, has not been materially increased, though a good many have been diverted from butter making to cheese making. In the older dairy regions, the increase in the number of factories has not materially increased the make of cheese. The tendency is to smaller factories and carrying milk shorter distances. Most of the new factories in Central and Northern New York divert patronage from older factories, and absorb private dairies. In the western counties they take cows from butter making. So also in the Western States, which are this year making not only enough cheese for home consumption, but are shipping quite freely for the first time to New York. It is calculated that the new factories this year will add fully one-sixth to the total make of cheese. Last year the weather was favorable, the feed good, and the make the largest ever known. Beginning with a bare market in the spring, we carried over 100,000 boxes, with which we began the season this year. Notwithstanding the complaints of dry weather in June, returns from three hundred and twenty-nine factories in this State showed that up to the 1st of July the make fully equaled that of last year. The yield at the present time is very large, and promises to continue large. The quality is rather inferior to that of last year, and there is justly great complaint about flavor. We have operated this year on a steadily though slowly declining market, which promises to go still lower in view of the large stock on hand, and the probable heavy fall make. There can be no doubt that this year's cheese crop will be the heaviest ever realized. A vastly increased consumption will be necessary to keep up prices, a decline in which would probably be the surest way of increasing consumption, though it would diminish profits."

### COTTON AND TOBACCO IN LOUISIANA.

The first open bolls of cotton were brought into Iberia, Louisiana, July 10, others following in regular succession. The first bale of new cotton was received at New Orleans on the 28th of July, an earlier date than any since the war. It was from the plantation of John M'Allen, near Brownsville, Texas. We annex a table of the first receipts at New Orleans, and the receipts to September 1, for a series of years, taken from the New Orleans Price Current:

Date of receipt of first bale.	Receipts of new crop to Sept. 1.	Total receipts at New Orleans.	Total crop.
1857—August 15 .....	33	1857-'58..1, 678, 616	3, 113, 962
1858—July 25.....	4, 834	1858-'59..1, 774, 298	3, 851, 481
1859—July 28.....	9, 698	1859-'60..2, 255, 448	4, 675, 770
1860—July 5 .....	36, 670	1860-'61..1, 849, 312	3, 699, 926
1861—August 11.....	61	1861-'62.. } 38, 880	
1862.....		1862-'63.. } 22, 78	*3, 900, 000
1863—September 7.....		1863-'64.. } 131, 044	
1864—August 14.....	12	1864-'65.. 271, 015	*500, 000
1865—August 11.....	22	1865-'66.. 787, 386	*800, 000
1866—August 7.....	133	1866-'67.. 780, 480	1, 951, 988
1867—August 15.....	19	1867-'68.. 668, 395	2, 430, 893
1868—August 10.....	476	1868-'69.. 841, 216	2, 261, 000
1869—August 3.....	267		
1870—July 28.....			

\* Estimate.

Our correspondent at Iberia, Louisiana, sends to the Department a fine specimen of common tobacco, cured and brought in as early as the 14th of July. It is a sample of a crop of four acres.

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### BEET SUGAR FACTORIES IN CALIFORNIA.

W. Wadsworth, superintendent of the Sacramento Valley Beet Sugar Company, near Sacramento, California, informs the Department that, in preliminary operations carried on in the fall of 1869, using an open shed as a factory, and with merely temporary machinery, at a cost of \$3,000, he obtained 142 pounds of good merchantable sugar from one ton of beets, (being more than 7 per cent.,) besides four gallons of inferior sirup. In March of this year he again went to Germany and contracted with Seele & Co., of Brunswick, for 450 tons of machinery, for a factory capable of producing 75 tons of sugar daily; this machinery to be shipped in December. The company will adopt the Roberts's diffusion process.

The Alameda Beet Sugar Company, at Alvarado, of whose inception an account was given in the monthly report of the Department for July, have from 300 to 400 acres in beets. The general appearance of the crop, and the results of saccharine tests of samples taken weekly from the fields, so far give satisfactory evidences of the adaptability of that soil and climate to the production of the sugar beet. The factory of the company is 200 feet in length by 50 in width, and three stories high, erected at a cost of \$20,000; the machinery costing about \$120,000. The superintendent is A. D. Bonesteel, lately proprietor of a beet sugar sugar factory at Fond du Lac, Wisconsin.

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### CANAL FROM THE MISSISSIPPI TO LAKE BORGNE.

Work is actively progressing on the new canal which is to connect the Mississippi at New Orleans with Lake Borgne and the Gulf of Mexico; and it is stated that the enterprise will be completed by the latter part of next winter. The canal will be 70 feet wide and 12 feet deep, and its lake terminus is to be at Fort Dupries, seven miles distant from the Mississippi. About a thousand feet from that river is to be a lock, 500 feet long by 147 feet wide, and 18 feet deep. For vessels drawing nearly 12 feet the distance between New Orleans and the deep waters of the Gulf will be shortened about 70 miles. Small craft from New Orleans for Mobile and Florida ports will save 15 miles in distance, and the transshipment of many bulky articles will be obviated. The transfer of grain in barges to ships at Ship Island will be facilitated, and it is claimed that the cost of grain transportation will be diminished 5 cents per bushel.

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### NEW MINERAL FERTILIZER.

A new mineral fertilizer has been discovered in rock of the "Grafton Gold Mine," in Lyman, Grafton County, New Hampshire. About fifty pounds of the material were sent in April, 1869, to Dr. Torrey, United States assayer at New York City, who reported that it was found to con-



tain 40 per cent. of silica, the remainder being nearly all dolomite, or a double carbonate of lime and magnesia. An examination of a sample by Thomas C. Raymond, of Cambridgeport, Massachusetts, gave the following result:

Silica .....	30.3
Protoxide of iron .....	6.27
Lime .....	20.6
Magnesia .....	11.17
Carbonic acid .....	32.11
Total .....	<u>100.45</u>

Several farmers of Grafton County state that by applications of this fertilizer to corn, potatoes, turnips, fruit trees, &c., they have obtained a more rapid growth and a very large increase in yield of crops.

#### HOME-MADE FERTILIZERS.

A Virginia correspondent of the Department, after expressing his appreciation of the paper on "Bone Fertilizers," in our Monthly Report for July, remarks that few farmers are sufficiently well informed in the principles of chemistry to make a successful application of the waste material on their farms. He adds, that this season he used fine charcoal, sawdust, and Peruvian guano, with gypsum, for potatoes; and in another case substituted wood ashes for the guano. The results were good in the first case, but were better still in the latter. The first-mentioned compost, with an addition of sulphate of soda, was used for cabbages with good results, which would have been greatly enhanced if there had been the requisite amount of moisture in the soil.

#### FRAUD IN FERTILIZERS.

B. Smith writes to the St. Louis (Missouri) Journal of Agriculture, cautioning the public against a spurious fertilizer sold under the title of "bat manure." He states that the genuine bat manure is about the color of Scotch snuff, and that its weight is about the same as that of bran, bushel for bushel, while the weight of certain materials of slight fertilizing power, which have been vended under the title, is from four to six times as great. In instances which have come under his own inspection he judges the spurious fertilizer to be chiefly composed of clay procured from caves where it has become impregnated to some extent with saltpeter. He has found the genuine bat manure a very effective fertilizer.

## MARKET PRICES OF FARM PRODUCTS.\*

Articles.	August.		September.	
NEW YORK.				
Flour—Superfine, State.....	\$5 30	to \$5 95	\$5 10	to \$5 45
western.....	5 30	to 5 95	5 10	to 5 40
Extra, western.....	6 15	to 6 25	5 45	to 5 65
Wheat—No. 2 spring.....	1 24	to 1 55	1 20	to 1 25
No. 3 spring.....	1 52	to 1 55	1 11	to 1 44
Winter red and amber, western.....	95	to 1 00	84	to 85½
Corn—Western, mixed.....	1 08	to 1 09	90	to 90
Yellow.....	55	to 56	50	to 52
Oats—Western.....	64	to 66	51	to 57
State.....	85	to 90	85	to 90
Hay—Shipping qualities.....	30 25	to 30 50	90	to 1 25
Prime.....	16 00	to 19 00	16 00	to 19 00
Pork—Mess.....	12 00	to 16 00	12 00	to 16 00
Prime mess.....	16 00	to 19 00	16 00	to 19 00
Beef—Plain mess.....	16	to 17½	16	to 17½
Extra mess.....	20	to 28	20	to 30
Lard—Prime.....	24	to 33	24	to 38
Butter—Western.....	8	to 14	5	to 13
State, dairy.....	10	to 14½	5	to 14
Cheese—Dairy.....	19	to 19½	18½	to 19½
Factory.....	19½	to 19½	19½	to 19½
Cotton—Low middling, uplands.....	20½	to 20½	20½	to 20½
Mobile.....	20½	to 20½	20½	to 20½
New Orleans.....	20½	to 20½	20½	to 20½
Middling, uplands.....	20½	to 20½	20½	to 20½
Mobile.....	20½	to 20½	20½	to 20½
New Orleans.....	20½	to 20½	20½	to 20½
Tobacco—Sound lugs, heavy.....	9	to 10	8	to 8½
Common leaf, heavy.....	10½	to 10½	9	to 9½
Medium leaf, heavy.....	11	to 11½	10	to 10½
Wool—Combing, fleece.....	55	to 60	55	to 60
Extra, pulled.....	37	to 42	37	to 42
Texas, common, unwashed.....	18	to 21	23	to 26
CHICAGO.				
Flour—White winter, extras.....	7 00	to 8 25	6 50	to 8 25
Red winter, extras.....	6 01	to 6 75	6 00	to 6 75
Spring, extra.....	6 00	to 6 50	5 50	to 6 25
Spring, superfine.....	4 75	to 5 00	4 25	to 4 50
Wheat—No. 1 spring.....	1 30	to 1 32	1 10	to 1 10½
No. 2 spring.....	1 23	to 1 30	99½	to 1 09½
No. 3 spring.....	1 10	to 1 12½	90	to 1 03
Corn—No. 1.....	83½	to 85½	64½	to 66
No. 2.....	76½	to 78	62	to 62½
Rejected.....	43	to 45	37½	to 38
Oats—No. 1.....	39	to 40	34½	to 35½
No. 2.....	14 00	to 15 50	15 01	to 16 00
Hay—Timothy, pressed.....	11 00	to 14 00	10 00	to 13 00
Prairie, loose.....	25	to 26	23	to 25
Pork—Prime mess.....	28	to 30	27	to 28
Mess.....	13½	to 14½	13½	to 14½
Beef—City mess.....	11½	to 12½	11½	to 12½
Country mess.....	15½	to 16½	15½	to 16½
Extra mess.....	15½	to 16½	15½	to 16½
Lard—In tierces.....	14½	to 15	14½	to 14½
No. 1.....	23	to 25	24	to 26
Butter—Choice firkin.....	14	to 18	16	to 18
Common to medium.....	0 13	to 14	0 13½	to 14
Cheese—New York factory.....	11	to 12	11½	to 12½
Western factory.....	11	to 12	11½	to 12½
Western reserve.....	24	to 28	24	to 28
Wool—Unwashed, fine.....	27	to 30	27	to 30
Unwashed, medium and coarse.....	45	to 50	45	to 50
Tub.....				
CINCINNATI.				
Flour—Family.....	6 60	to 7 00	5 50	to 5 75
Extra.....	6 35	to 6 60	5 25	to 5 50
Superfine.....	5 75	to 6 10	4 50	to 4 75
Wheat—No. 1 white.....	1 50	to 1 55	1 25	to 1 25
No. 2 white.....	1 40	to 1 45	1 20	to 1 25
No. 1 red.....	1 33	to 1 35	1 15	to 1 16
No. 2 red.....	1 28	to 1 30	1 12	to 1 12

\* Record made as near the first of each month as practicable.

† New.

## Market prices of farm products—Continued.

Articles.	August.	September.
CINCINNATI—Continued.		
Corn—No. 1.....	— to \$0 90	\$0 79 to \$0 80
No. 2.....	— to —	— to —
Oats—White.....	\$0 50 to 55	— to —
No. 1 mixed.....	48 to 50	— to —
No. 2.....	45 to —	— to —
New.....	— to —	40 to 50
Hay—Common.....	14 00 to 15 00	12 00 to 14 00
Loose, pressed.....	19 00 to 20 00	17 00 to 18 00
Pork—City mess.....	30 00 to 30 50	27 50 to 29 60
Prime mess.....	— to —	— to —
Lard—Prime steam.....	— to 16	15 to 15½
Kettle, in tierces.....	— to 16½	— to 16
Butter—Choice Ohio.....	25 to 27	22 to 30
Fair to good.....	20 to 22	22 to 25
Cheese—Choice factory.....	13½ to 14	13½ to 14
Western reserve.....	— to —	10 to 12½
Cotton—Low middling.....	17½ to 17¾	17½ to 18
Middling.....	18½ to 18¾	18½ to 19
Tobacco—Common lugs, West Virginia.....	4 50 to 6 50	4 50 to 6 50
Ohio.....	5 50 to 6 25	5 50 to 6 25
Kentucky.....	8 00 to 9 50	7 50 to 9 50
Wool—Tub-washed.....	43 to 47	44 to 47
Fleece-washed, manufacturing.....	39 to 42	40 to 43
combing.....	42 to 45	42 to 45
Unwashed, manufacturing.....	27 to 31	30 to 31
combing.....	32 to 34	32 to 35
ST. LOUIS.		
Flour—Spring.....	4 00 to 4 75	4 60 to 4 75
Winter.....	4 60 to 7 00	4 75 to 7 25
Wheat—No. 1 red.....	1 17 to 1 38	1 22 to 1 27
No. 2 red.....	1 16 to —	1 15 to 1 18
No. 3 red.....	1 08 to 1 16	1 05 to 1 10
White, according to grade.....	1 10 to 1 40	1 00 to 1 40
Corn—No. 2 mixed.....	62 to —	76 to 88
Yellow.....	67 to —	— to —
White.....	— to —	85 to 98
Oats—Mixed, (in gunnies).....	38 to —	42 to 43
No. 2 mixed.....	35 to —	— to —
Hay—Prime, tight-pressed.....	16 00 to —	16 00 to —
Choice, tight-pressed.....	17 50 to —	16 00 to 18 00
Pork—Mess.....	28 00 to 28 50	31 00 to —
Lard—Prime steam, (tierces).....	15½ to 16	16½ to 16¾
Butter—Choice yellow.....	26 to 29	25 to 28
Prime.....	22 to 25	18 to 20
Cheese—Ohio factory.....	14½ to 14¾	— to —
New York factory.....	14½ to 15	— to —
Cotton—Middling.....	17½ to —	17½ to 18
Tobacco—Factory lugs.....	5 50 to 6 50	6 00 to 7 00
Common leaf.....	8 75 to 9 59	8 75 to 9 75
Medium.....	9 75 to 10 25	10 00 to 11 00
Wool—Tub-washed.....	36 to 46	35 to 45
Fleece-washed.....	31 to 41	30 to 40
Unwashed, combing.....	33 to 34	32 to 33
pulled.....	30 to 32	30 to 32
NEW ORLEANS.		
Flour—Superfine.....	5 25 to 5 37½	5 25 to 5 35
Choice extra.....	7 25 to 7 75	7 00 to 7 75
Corn—Mixed.....	95 to 1 00	80 to 85
White.....	1 05 to 1 07½	92 to —
Oats.....	53 to 64	48 to 54
Hay—Fair.....	23 00 to 24 00	— to —
Prime.....	25 00 to —	26 00 to —
Choice western.....	26 00 to —	28 00 to —
Pork—Mess.....	32 00 to 32 50	30 00 to —
Beef—Extra mess.....	13 50 to 15 00	13 00 to 13 50
Lard—Choice tierce.....	17 to 17½	17½ to 17½
Butter—Choice western.....	26 to 28	24 to 28
Common northern.....	30 to 33	25 to 30
Cheese—Factory.....	14 to 16	13½ to 14½
Cotton—Low middling.....	16½ to 17	17 to 17½
Middling.....	17½ to 17¾	18 to —
Tobacco—Common to good lugs, (heavy).....	7½ to 9½	7½ to 8½
Medium leaf, (heavy).....	10 to 11	10 to 10½
Wool—Louisiana.....	24 to 25	— to —
Mexican.....	13 to 15	— to —



*Market prices of farm products—Continued.*

Articles.	August.		September.	
SAN FRANCISCO.				
Flour—State.....	\$5 50	to \$6 50	\$4 50	to \$6 00
Oregon.....	5 50	to 6 50	4 50	to 6 00
Wheat—State.....	1 75	to 1 90	1 50	to 1 70
Oregon.....	1 80	to 1 90	1 70	to 1 70
Corn—White.....	1 40	to 1 50	1 40	to 1 50
Yellow.....	1 40	to 1 50	1 40	to 1 50
Oats.....	1 50	to 1 75	1 05	to 1 35
Hay—State.....	9 00	to 14 00	7 50	to 13 00
Pork—Mess.....	25 00	to 26 00	26 00	to 27 00
Prime.....	25 00	to 22 50	22 50	to 23 00
Beef—Mess.....	15 00	to 20 60	18 00	to 20 00
Lard—In barrels.....	15	to 16	15	to 16
Butter—California.....	25	to 35	40	to 47½
Oregon.....	15	to 20	15	to 20
Overland.....	15	to 20	15	to 35
Cheese.....	10	to 15	10	to 17
Wool—Native.....	14	to 15	13	to 15
California.....	18	to 22½	18	to 21
Oregon.....	25	to 26	24	to 26

## CROPS IN ENGLAND.

Mr. James Sanderson, in his annual harvest report to the London Times, states that on all strong soils, as well as on light soils incumbent on cool subsoils, the wheat crop is considerably over an average, the yield ranging from six bushels to seventy-two bushels per acre. The average product is estimated at thirty bushels to the acre—just the average crop. The acreage sown to wheat is reported as under average, and consequently the total product will fall short of an average yield.

The barley crop, like wheat, is good on deep, cool subsoils. The product is estimated at twenty per cent. below an average. Oats suffered from the drought; the straw is exceedingly short, but the ears comparatively large. The crop is fifteen per cent. under average. The bean crop is one-third deficient. Peas, an average crop.

In many parts of the southern counties the potato crop is inferior, the tubers being few and small. In the chief potato-growing counties, however, the yield promises an average; the quality is good, with no symptoms of disease as yet. Mangolds, the most successful root in a dry season, is somewhat late, but the plants are regular and healthy. Turnips, though late, are generally healthy, and with a favorable autumn may prove an average crop.

Hay, in all the southern, midland, and eastern counties, has been nearly a total failure. Pastures, severely scorched.

## THE COTTON SEASON OF 1869-'70 IN INDIA.

From the official report of Harry Rivett-Carnac, cotton commissioner, to the Chamber of Commerce, Bombay, we learn that though the area planted in cotton last year in the Central Provinces and the Berars was considerably larger than ever before, the product shows a marked decline. The acreage, compared with that of 1868-'69, was as follows:

	Aeres, 1868-'69.	Aeres, 1869-'70.
Nagpore .....	298, 764	385, 808
Jubbulpore .....	73, 771	78, 251

	Acre, 1863-'69.	Acre, 1689-'70.
Nerbudda.....	141, 751	131, 271
Chutteesgurh.....	236, 589	228, 697
East Berar.....	622, 516	648, 177
West Berar.....	664, 226	767, 609
	<hr/>	<hr/>
	2, 037, 617	2, 239, 813
		<hr/>
		2, 037, 617
		<hr/>
Increase.....		202, 196
		<hr/>

In the Central Provinces the increased acreage was 73,152 acres, or  $9\frac{1}{2}$  per cent.: in the Berars, 129,044 acres, or about  $10\frac{1}{2}$  per cent. In the former provinces cotton occupies about  $6\frac{1}{2}$  per cent. of the whole cultivated area, and in the Berars about 30 per cent.

With such an increase in acreage a larger supply of cotton was of course looked for, but unseasonable rains and the boll-worm reduced the product about 23 per cent. below the preceding crop, the exports for the year toward Bombay aggregating only 214,582 bales, against 275,712 bales in 1868-'69. The decrease is pretty evenly distributed over the cotton-producing districts, each station showing a falling off in exports. The estimated stock left in the provinces is 8,000 bales.

The commissioner reports great improvement in packing the cotton in the interior. In 1867 the system of pressing was commenced. At first "full pressing" did not make much progress, 2 per cent. only of the crop passing through the full presses. The half presses, however, secured 13 per cent., so that 15 per cent. of the crop was shipped pressed more or less, against 85 per cent. sent to market in loose bags. During the season just closed 59 per cent. of the crop exported went to the full presses, and  $35\frac{1}{2}$  per cent. to the half presses, leaving but a small percentage to be sent in the loose bags.

Experiments with exotic plants are reported failures, though the season was deemed favorable to them. Further trial will be given them this season. Much attention has been devoted to the improvement of the indigenous varieties by selection of seed, &c., and various experiments have been tried with manures, deep plowing, &c., with satisfactory results, notwithstanding the unfavorable season. In one instance the combined effect of good seed and deep plowing resulted in a crop of 255 pounds of cleaned cotton to the acre. Ordinary fields, similarly treated, produced 176 pounds to the acre.

The commissioner remarks that deep plowing appears to be of great benefit to the plant, and that those parts of the seed farm which have been thus treated show very favorably by the side of the fields cultivated in the ordinary method. The plants in the well-plowed fields were much stronger and healthier than their neighbors, and while 180 pounds of clear cotton were picked from these fields, the ordinary native fields yielded hardly 50 pounds to the acre. It is proposed to order from England a steam plow for use in the Central India country.

Although the past season has been an unfavorable one, with a large decline in the exports, the commissioner thinks the prospect of the cotton trade in the Central Provinces and the Berars far from discouraging, and that an increased area would be planted for the crop of 1870-'71.

## ITEMS FROM VARIOUS SOURCES.

**THE CRANBERRY.**—A correspondent, who is interested in resuscitating southern agriculture, is anxious to ascertain whether the cranberry (*vaccinium macrocarpus*) has ever been noticed as growing wild in Georgia and Florida. It is found in the level, wet lands of the Alleghany Mountains, known as the "Glades," and in the swamps of North Carolina. There are thousands of acres of swamp and glade lands in the southern States suitable for the growth of the cranberry, provided there are no unfavorable climatic influences, and that there is no danger of the plant being choked by the rank growth of grass and coarse aquatic plants.

**THE JAPAN PRIVET.**—A correspondent in Chatfield, Navarro County, Texas, says: "The Japan privet, (*Ligustrum japonicum*,) recommended in the annual report of the Department of Agriculture for 1868, will prove a mine of wealth to Texas as an inside hedge plant." Its cuttings take root as speedily as the easiest rooting willow twig. It is almost an evergreen, retaining its foliage nine months of the year, even after severe frosts. It is of rapid growth, and must not be confounded with the common privet, (*L. vulgare*,) a small-leaved and much inferior plant. He says the farmers of Texas are better off than before the rebellion. Their lands have doubled in value, and increased attention is paid to introducing improved stock and substituting better farming implements and machinery for the clumsy appliances of former days; and the improvements on their farms generally are of a better character. Increased attention is paid to fruits, and even apples thrive on some soils at 32°; he raised one last year that weighed 17½ ounces, though rabbits and hares girdle the trees badly. Plums succeed admirably, ripening about the middle of June. Peaches, grapes, and all the small fruits likewise do well.

**WINE SHIPMENTS.**—The editor of the Commercial Herald of San Francisco compiles a statement of the California wines and liquors exported from this State to the Eastern States and Europe during the last two and a half years, as follows:

The aggregate shipments of all kinds by the parties named are as follows: Lake Vineyard Wine Company, 155,935 gallons; Eberhardt and Lachman, 63,148 gallons; United Aneheim Wine Growers' Association, 237,600 gallons; Kohler and Frohling, 116,374 gallons; S. Brannan & Co., 47,000 gallons; H. D. Dunn & Co., 1,830 gallons; G. Groezinger, 125,000 gallons. Total, 848,637 gallons.

**VINTAGE IN PLEASANT VALLEY.**—It is estimated that the present vintage in Pleasant Valley, New York, will yield 7,000 tons of grapes. The Pleasant Valley Wine Company is intending to make 100,000 gallons of wine this fall.

**SPARROWS vs. MUSQUITOES.**—Among the beneficial results following the introduction of English sparrows into New York, it is stated that a remarkable diminution in the swarms of mosquitoes in that locality is noticed. It is but four years since twenty pairs were imported from England. Care was taken to protect them through the winter, and they have increased with such rapidity that it is estimated there are now five thousand pairs in the parks and gardens of New York, Brooklyn, and Jersey City. They have nearly exterminated the disgusting measuring worm and other insect nuisances that had become so annoying to residents, and which threatened the destruction of the fine shade trees of the latter city.

**DOGS vs. SHEEP.**—A small flock of choice, highly-valued, Southdown



sheep, owned by George H. Gill, of Kirkwood, Missouri, were all killed by dogs in one night in June.

**SALT IN ALAMEDA COUNTY, CALIFORNIA.**—Between 600 and 700 tons of salt will be made in this county this season by evaporation from sea water which is run on flats prepared for the purpose.

**ARTESIAN WELLS IN LOS ANGELES COUNTY, CALIFORNIA.**—In Los Angeles Valley artesian wells are completely successful, water being obtained in great abundance at depths raging from 75 to 200 feet.

**GUANO USED IN AUSTRIA.**—The following returns for the Austrian empire include the guano used in Hungary: In 1861 it was 12,819 cwt.; in 1862, 13,370 cwt.; in 1863, 18,650 cwt.; in 1864, 35,264 cwt.; in 1865, 45,264 cwt.; in 1866, (the year of the war with Prussia,) 23,846 cwt.; in 1867, 63,446 cwt.; in 1868, 67,684 cwt.; in 1869, 106,514 cwt.

**PERUVIAN GUANO.**—The total export of Peruvian guano for the year 1869, as shown by custom-house returns at Callao, was 512,757 tons, valued at \$25,000,000. Of this quantity, Belgium took 82,428 tons; England, 196,840 tons; North America, 25,321 tons.

**DRAUGHT HORSES FROM EUROPE.**—Messrs. Slattery, Russ, and McCourtie, of Iroquois County, Illinois, have imported from France five full-blooded Percheron Norman horses, for the improvement of the stock of that county. Their respective weights range from 1,550 pounds to 1,800 pounds, and their height from 16½ to 17½ hands. Mr. James A. Perry, of the same county, has also imported four full-blooded Percherons, and an English draught horse weighing 1,940 pounds at three years old.

**MUSTY OATS.**—A South Carolina correspondent, after reporting the loss of a horse, supposed to result from eating musty oats, says: "I am certain more horses die in the South from eating damaged oats than from all other causes. As the oats are cut rather green, and often with many green weeds among them, it is very difficult to keep them from molding more or less in the center. Many animals die from this cause, which are supposed to have had blind staggers, as in the case of mine. Another horse recently died near me in the same way, after being fed on oats mostly sound, but some of the bundles musty in the middle."

# METEOROLOGY.

COMPILED IN THE DEPARTMENT OF AGRICULTURE FROM REPORTS MADE BY OBSERVERS OF THE SMITHSONIAN INSTITUTION.

Table showing the highest and lowest range of the thermometer, (with dates prefixed,) the mean temperature, and amount of rain-fall (in inches and tenths) for July and August, 1870, at the stations named. Daily observations at 7 a. m., and 7 and 9 p. m. Tables from reports received up to September 15; notes from reports received up to September 13.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
MAINE.		°		°	°	In.		°		°	°	In.
Mount Desert.....							10, 13	85	2	51	70.2	4.15
Houlton .....	24	99	2	55	73.2	4.00						
Orono.....	24	93	1	52	68.9	1.78	10, 18	87	27	44	66.7	3.21
Williamsburg.....	24	95	1, 29	54	69.3	2.47	9	87	26, 31	52	67.2	3.15
West Waterville.....	24	95	1, 4	58	73.9	1.29	9	95	26	52	70.1	1.90
Gardiner.....	24	89	4	55	71.5	2.43	9	84	16	53	68.4	1.99
Lisbon .....	23	94	4	53	71.4	3.27	10, 18	90	27	47	68.4	3.40
Norway.....	24	100	4	54	73.4	1.60	8, 9	90	26	53	69.2	1.65
Cornish.....	24	94	2, 4	56	71.9	2.74	9	92	27	47	69.5	3.55
Cornishville.....	24	96	1	57	74.0	3.25	9	92	27	52	71.7	4.70
Averages .....					71.9	2.54					69.0	3.08
NEW HAMPSHIRE.												
Stratford .....	24	98	1	52	69.1	2.47	7	89	27	40	65.1	3.86
Whitefield .....	24	92	1	50	71.0	2.47	19	89	27	38	67.7	3.98
Tamworth .....	24	97	1	53	72.8	1.62	9	96	27	48	69.8	2.45
Goffstown Center.....	23	100	1	56	75.4	1.87	9	101	27, 31	56	73.7	1.43
Averages .....					72.1	2.11					69.1	2.93
VERMONT.												
Lunenburg .....	24	89	2	56	72.6	4.56	9	90	26	48	67.8	6.42
North Craftsbury.....	24	89	1	48	69.6	2.86	9	91	26	43	64.5	4.62
Newport.....							9	94	27	46	67.7	4.15
East Bethel.....	24	93	2	50	74.1	2.11	9	97	27	42	67.3	1.36
Woodstock .....	18, 19, 24	87	1, 2	53	70.1	1.82	9	88	27	45	65.6	1.03
West Charlotte.....	24	96	1	57	76.7	3.41	7, 19	96	27	50	73.6	3.25
Panton .....	24	95	1	58	77.8	5.25	19	92	26	48	72.4	2.72
Castleton .....	24	94	2	55	74.5	2.89	8, 19	89	27	45	69.9	0.90
St. Albans .....	24	90	1	56	72.9	3.35	19	88	26	47	68.2	4.40
Averages .....					73.5	3.28					68.6	3.21
MASSACHUSETTS.												
Kingston .....	25	94	1	55	72.0	2.87	7	93	27	52	72.0	1.37
Topsfield .....	24	92	1	57	73.4	1.41	7, 20	91	27	54	72.0	5.27
Lawrence .....	24	95	1	57	74.4	1.55	7, 9	92	27	55	72.4	3.64
Newbury .....	29	93	1	56	76.0							

Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain fall.
MASSACHUSETTS—Continued.		°		°	°	In.		°		°	°	In.
Georgetown							8	97	27	49	73.5	7.33
Milton	24	97	2, 4	59	74.8	1.53	4	100	22	55	75.6	1.33
Cambridge	25	94	1	60	76.4		7	92	27	57	75.4	
North Billerica	17, 24	92	1	53	74.7		7, 9	92	22, 27	53	73.3	
West Newton	23, 24	100	3	52	77.4	1.42	7	100	26	57	77.1	0.56
New Bedford	25	89	3	56	70.9	2.98	5	86	27	53	70.6	1.65
Worcester	24, 25	90	4	60	73.0	2.39	7	88	27	53	71.7	2.74
Mendon	{ 17, 23, 24, 26 }	88	1	59	73.2	2.65	7	90	23	56	72.2	1.75
Lunenburg	24	92	1	53	74.4	2.17	7	94	27	51	73.0	2.42
Amherst	17, 24	91	2	55	73.6	2.53	{ 7, 9, 12, 19 }	91	27	47	71.1	2.83
Richmond	17	91	2	58	74.1	4.25						
Williams College	24	90	2, 4	54	72.2	3.89	9	94	27	44	69.1	5.77
Hinsdale	19, 23, 24	86	2	57	71.4	4.90						
Averages					73.9	2.66					74.2	3.07
RHODE ISLAND.												
Newport	19, 25	88	3	55	67.1	3.06	5	84	27	55	75.2	2.49
CONNECTICUT.												
Columbia	17	93	1, 4	60	75.0	4.05						
Middletown	18	95	4	55	74.3	1.54	7	97	27	48	73.2	3.14
Southington	17, 23	95	3	53	74.9	1.02	7	95	27	54	72.9	1.73
Colebrook	18, 19	91	9	56	72.8	3.77	7	90	27	51	70.3	2.73
Brookfield	17	95	4	56	74.8	3.40	25	93	1, 26	60	74.7	
Averages					74.4	2.76					72.8	2.53
NEW YORK.												
Moriches	26	93	3, 4	58	71.4	2.41	7	88	27	57	69.5	5.85
South Hartford	17, 24	94	2	52	77.6	3.79	19	93	27	52	75.8	1.45
Caldwell	17	89	2	58	74.1	3.00	8	87	27	53	71.0	6.55
Garrison's	17	94	3	59	75.5	2.97	6, 7, 9, 19	90	27	54	73.0	1.91
Throg's Neck	17	92	3	59	75.9		2	83	14	60	75.1	
White Plains	17	87	3	58	71.8							
Cooper Union	17	95	3	63	77.9	4.72	7	89	28	63	77.3	3.79
Flatbush	17	97	3	59	81.6	2.81	2	90	27	57	78.5	3.08
Brooklyn	17	95	4	62	77.4	4.00	2	92	27	60	76.1	3.90
Glasco	17	99	1, 4, 5	60	75.0	1.50	13	93	15	50	70.0	4.40
Newburg	17	97	3	60	78.5	2.55						
Minaville	24	97	4	56	75.5	3.65	19	94	27	49	74.6	2.30
Cooperstown	24	95	2	55	73.9	4.14	9	93	27	41	69.7	2.74
Gouverneur	24	90	1	56	71.9	2.37	19	88	27	44	68.3	1.87
North Hammond	19	99	1, 9	62	76.9	1.27	11	100	26, 27	54	76.3	2.06
Houseville	20	90	1, 8	55	72.8	3.95	6	89	26, 27	50	68.7	2.51
Leyden	20	88	1	55	70.2	3.09						
Utica	19, 24	94	2	57	75.3	6.69	8	91	27	48	70.8	7.26
South Trenton	20	94	4	56	73.0	6.50	9	93	27	45	69.1	7.01
Cazenovia	20	90	30	58	72.0		8	88	27	45	68.3	
Oneida	20, 24	94	1	55	78.0	6.73	25	93	26, 27	50	70.0	14.40



Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
NEW YORK—Con.		°		°	°	In.		°		°	°	In.
Depauville.....	19	89	1	56	71.2	1.58	8, 11	92	27	44	70.1	1.37
Oswego.....	20	85	1	57	71.4	4.72	6, 29	85	27	51	69.4	3.50
Palermo.....	24	92	1, 2	57	72.8	3.70	8	94	26	52	69.6	0.50
North Volney.....	4, 19, 23	89	1	56	74.0	.....	8	94	26, 27	51	71.4	.....
Waterburg.....	26	98	1, 3	54	72.4	.....	7	95	26, 27	42	69.2	.....
Nichols.....	20	97	3, 8, 22	57	73.8	.....	25	96	27	44	70.7	.....
Newark Valley..	19, 23	94	8, 9	54	72.7	2.80	25	92	27	39	66.4	.....
Himrods.....	17	86	1, 3	56	70.2	5.06	8	90	27	43	65.3	1.63
Rochester.....	23	87	15	58	72.6	4.72						
Little Genesee...	23	91	30, 31	52	69.7	8.86	{ 6, 7, 18, 19 }	88	27	40	67.5	3.21
Suspension Bridge	17, 23	94	3, 9	56	72.1	4.25	8, 19	92	27	46	71.8	3.35
Lockport.....	23	87	1	58	71.2	2.79	8	89	27	51	70.3	2.52
Buffalo.....	6	90	1	58	72.4	3.10	7	97	27	46	71.7	1.58
Averages.....					73.9	3.84					71.2	3.70
NEW JERSEY.												
Paterson.....	17	98	3	61	77.6	3.82	11	95	27, 28	56	75.5	4.43
Newark.....	17	92	4	56	75.6	6.97	7	88	27	54	73.3	3.10
Trenton.....	17	97	3, 4	62	80.5	3.83	9	93	14, 27	60	78.3	3.93
Rio Grande.....	18	101	9	63	78.9	5.88	25	97	27	54	76.6	0.38
Moorestown.....	17, 13	93	2, 3	60	76.8	3.51	6, 25	92	27	58	74.5	3.69
New Germantown	17	94	3	58	76.0	5.74	25	95	31	52	73.9	2.38
Readington.....	17	96	3	60	76.6	.....	7	94	16, 29	54	73.2	.....
Haddonfield.....	17	95	2	59	77.0	3.61	6	97	27	58	74.5	4.72
Newfield.....	17	100	3	58	79.7	.....						
Greenwich.....	17	92	3	61	77.9	2.50	4, 6	89	27	60	75.5	9.84
Vineland.....	17	99	4	60	80.3	3.04	6	95	14, 27	62	76.9	8.15
Averages.....					77.9	4.32					75.2	4.51
PENNSYLVANIA.												
Nyces.....	19	92	8	54	72.3	2.50	18	89	21, 26	50	69.1	4.50
Hamlington.....	23	94	3	56	76.8	3.60	6, 25	91	27	48	75.0	2.31
Fallsington.....	17	95	3	61	77.0	4.00	2, 3, 25	91	27	59	76.0	3.90
Philadelphia.....	17	95	3	61	80.1	3.50	3, 9	92	27	60	78.1	5.98
Germantown, (M.)	17	97	4	62	77.7	.....	25	94	27	60	77.1	.....
Do.....(T.)	17	94	3	63	78.7	11.75	6, 9, 25	91	{ 15, 27, 28 }	63	76.0	3.08
Horsham.....	17	91	3	58	75.4	6.21	3, 9, 25	89	27	58	73.3	4.13
Plymouth Meet'g.	16, 17	93	3	60	76.5	5.21	9, 25	89	27	58	73.5	5.06
White Hall.....	16, 17	92	31	57	78.2	.....						
Factoryville.....	24	94	3, 4, 7, 9	60	73.7	5.23	6, 25	92	27	44	70.0	1.82
Reading.....	17	94	3	62	77.8	3.74	25	91	27	59	75.1	5.58
West Chester.....							6	94	27	57	73.6	7.66
Parkersville.....	17, 25	94	3	61	78.9	3.35	6	94	21, 23	63	76.2	8.15
Tamaqua.....	17	92	10	51	71.0	3.20	25	90	26, 27	44	.....	
Catawissa.....	{ 17, 18, 20, 23 }	93	3	54	73.3	.....	6	94	22	50	72.6	.....
Ephrata.....	17	98	{ 2, 3, 4, 10, 11 }	62	76.8	3.83	25	92	14	59	74.7	3.65
Mount Joy.....	16	98	4	61	79.5	.....						
Harrisburg.....	17	99	2	64	80.1	2.36						
Carlisle.....	16, 17	98	3	59	77.2	5.90	6, 7, 8	93	22, 27	58	74.2	2.80

Table showing the range of the thermometer, &c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain fall.
WEST VIRGINIA.		°		°	°	<i>In.</i>		°		°	°	<i>In.</i>
Romney .....	17	102	31	66	81.8	.....	8	100	21, 22	60	77.7	.....
Weston .....	$\left. \begin{array}{l} 1, 6, \\ 22, 23, \\ 24, 27, \\ 28 \end{array} \right\}$	90	31	59	75.4	.....	9	92	21, 22	58	72.7	.....
Cabell C. H. ....	16, 27	98	31	56	78.1	7.30	.....	.....	.....	.....	.....	.....
Averages .....	.....	.....	.....	.....	78.4	7.30	.....	.....	.....	.....	75.2	.....
NORTH CAROLINA.												
Goldsboro .....	28	101	9	72	84.4	12.25	20, 26	99	16	65	82.3	6.95
Warrenton .....	1	94	9	68	81.5	5.80	12	86	16	62	76.5	5.00
Oxford .....	1	96	9	68	80.2	5.95	.....	.....	.....	.....	.....	.....
Albemarle .....	2, 18, 29	98	10	61	81.1	3.51	28	100	23	58	78.3	2.13
Statesville .....	1	94	9	60	76.8	7.50	.....	.....	.....	.....	.....	.....
Asheville, (A.) ...	28	87	9	59	73.8	6.40	26	85	16	63	72.4	5.60
Do. .... (H.) ...	12	84	9	56	72.4	.....	20, 25, 26	82	16	62	72.0	.....
Averages .....	.....	.....	.....	.....	78.6	6.90	.....	.....	.....	.....	76.3	5.07
SOUTH CAROLINA.												
Aiken .....	26, 28	96	30	70	82.7	2.36	20	93	14, 31	70	78.8	3.22
Gowdeysville .....	1, 2, 15	94	8, 10	74	82.3	5.74	25, 28	94	16	68	81.3	1.75
Bluffton .....	28	98	21	75	84.8	2.00	8	93	2, 3	75	83.0	6.10
Averages .....	.....	.....	.....	.....	83.3	3.37	.....	.....	.....	.....	81.0	3.36
GEORGIA.												
Berne .....	$\left\{ \begin{array}{l} 19, 20, \\ 28 \end{array} \right\}$	94	14, 24, 31	74	81.5	1.68	3	90	25	68	78.5	1.45
St. Mary's .....	19	94	5, 14, 15	74	81.5	.....	5, 16, 18	90	24, 25, 26	72	81.1	.....
Penfield .....	28	98	8	66	82.0	1.95	26	96	17, 31	71	80.2	2.09
Averages .....	.....	.....	.....	.....	81.7	1.82	.....	.....	.....	.....	79.9	1.77
ALABAMA.												
Rockville .....	14	98	8	70	83.7	6.13	$\left\{ \begin{array}{l} 8, 25, \\ 27, 28 \end{array} \right\}$	91	2	70	81.2	4.43
Carlowville .....	$\left\{ \begin{array}{l} 2, 7, \\ 12, 28 \end{array} \right\}$	96	$\left\{ \begin{array}{l} 15, 17, \\ 23, 30 \end{array} \right\}$	74	84.2	3.50	25	98	31	72	82.3	8.21
Greene Springs ..	14	95	9	64	79.9	7.38	.....	.....	.....	.....	.....	.....
Coatopa .....	27	96	8, 9	68	81.0	5.40	28	97	30	72	78.1	2.50
Fish River .....	6, 15	91	9	72	.....	.....	20	92	2	76	.....	.....
Averages .....	.....	.....	.....	.....	82.2	5.60	.....	.....	.....	.....	80.5	5.05
FLORIDA.												
Near Port Orange	20, 26	89	$\left\{ \begin{array}{l} 3, 5, 6, \\ 14, 15, \\ 22 \end{array} \right\}$	72	79.2	4.80	14	82	4	73	80.6	2.08
St. Augustine .....	3, 13, 18	92	14	72	81.5	2.50	17	94	$\left\{ \begin{array}{l} 1, 10, \\ 12, 21 \end{array} \right\}$	76	85.3	0.40
Jacksonville .....	19, 20	97	4, 14, 16	76	84.1	2.65	3, 10, 30	94	24, 26	77	84.4	4.40
Pilatka .....	3, 4	98	4, 5, 6, 8	74	82.4	4.16	$\left\{ \begin{array}{l} 1, 2, 7, \\ 11, 12, \\ 20, 28 \end{array} \right\}$	96	25, 26, 31	72	82.3	1.13
Manatee .....	18	94	23	74	83.1	11.00	.....	.....	.....	.....	.....	.....
Orange Grove .....	18, 20, 26	92	31	73	82.1	9.55	.....	.....	.....	.....	.....	.....
White Spring .....	$\left\{ \begin{array}{l} 10, 31, \\ 28, 29, \\ 30, 31 \end{array} \right\}$	96	19, 25	73	84.4	.....	.....	.....	.....	.....	.....	.....

Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
PENN'A—Con'd.		°		°	°	In.		°		°	°	In.
Fountain Dale . . .	17	94	3	59	77.0	3.66						
Tioga . . . . .	20, 23	96	9, 11, 22	56	73.5	6.75	8	94	27	38	69.4	4.05
Lewisburg . . . . .	17	94	3	58	76.2	3.99	7, 25	91	27	53	71.4	2.67
Grampian Hills . . .	23	93	{ 3, 8, 9, 30 }	56	70.9	6.63	6, 7, 8, 9	90	31	46	68.6	3.23
Johnstown . . . . .	24	92	9	54	73.5	4.47	7	90	15, 21	51	69.9	7.93
Franklin . . . . .	23	95	9	54	73.0	11.68	8	93	27	48	69.9	5.96
Pittsburg . . . . .	24	92	9	58	75.7	6.10						
Greencastle . . . . .	17	99	3	61	85.3	3.20	8	97	16, 22	58	78.3	6.10
Connellsville . . . .	23	98	8	60	77.8							
New Castle . . . . .							9	87	27	47	72.0	6.90
Brownsville . . . . .	20, 23, 27	92	30	64	81.0		5, 8, 25	92	{ 6, 15, 16, 17, 22, 23, 30 }	64	79.0	
Beaver . . . . .	17	92	9	58	74.1		8, 24, 25	88	21	54	71.6	
Canonsburg . . . . .	{ 17, 20, 23, 24 }	{ 92, 93 }	9	56	74.6	3.46	7, 8	91	16, 23, 31	53	71.8	3.81
Averages . . . . .					73.1	4.46					73.5	4.73
DELAWARE.												
Dover . . . . .						3.70	4, 25	92	23	64	79.4	3.85
Milford . . . . .	27	96	2, 3	62	79.6	4.30						
MARYLAND.												
Woodlawn . . . . .	17	95	3	58	77.9	4.17	2, 20, 25	90	27	58	76.0	3.83
Annapolis . . . . .	17	98	3	64	81.2	5.41	25	92	23, 27	65	78.7	1.77
Mt. St. Mary's . . .	25, 26, 27	91	3	59	76.0	3.50	3, 8, 25	87	27	58	72.7	3.28
Averages . . . . .					78.4	4.36					75.8	2.96
DIST. COLUMBIA.												
Washington . . . . .	17	94	9	67	79.5	4.80	4	89	27	63	76.9	2.05
VIRGINIA.												
Johnsontown . . . .	18	94	4, 8	67	79.5	3.40	25	95	23	64	77.7	0.45
Hampton . . . . .	18	100	8	67	81.4	2.55	25	98	23	64	79.0	2.35
Zuni Station . . . .	16	98	4, 8	72	83.1	1.78						
Surry C. H. . . . .	18, 25	100	30	70	85.4	2.40	10, 25	100	23	65	81.9	2.00
Comorn . . . . .	18	94	3	66	79.7	2.97	25, 29	90	27	64	78.2	0.81
Vienna . . . . .	17	93	2, 3	63	77.4	7.70	25	90	27	57	75.1	1.50
Fairfax C. H. . . . .	16	107	8	59	82.3	6.40	25	95	23	59	74.1	
Piedmont . . . . .	17, 28	96	9, 30	64	77.7	0.85	2, 7, 25	92	14, 21	61	83.8	2.75
Piedmont Station . .	17, 28	95	3, 11	62	76.6	0.80	25	93	16, 22	60	74.7	2.35
Staunton . . . . .	17, 28	89	31	64	75.1	4.33						
Lexington . . . . .	17	99	8, 9, 10	66	79.5	4.56	10	98	23	60	77.2	3.15
Lynchburg . . . . .	17	91	10	66	78.5		25	90	23	64	76.3	1.25
Near Wytheville . . .	28	86	9	57	74.1	2.50	{ 7, 8, 25, 28 }	84	16	62	72.3	7.60
Averages . . . . .					79.3	3.35					77.3	2.42



Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
FLORIDA—Cont'd.												
		°		°	°	<i>In.</i>		°		°	°	<i>In.</i>
Newport.....	27, 31	91	9	70	79.9	2.77	9, 19	93	2, 8, 12	73	80.2	2.65
Chattahoochee ...	11, 12	96	6	72	86.1	3.20	9	95	24	70	84.0	5.50
Averages.....					82.5	5.08					82.8	2.69
TEXAS.												
Clarksville.....	2	93	9	72	83.0	.....	21	88	31	70	82.3	.....
Gilmer.....	16, 17, 18	98	8	71	83.0	9.30						
Oakland.....	7, 29	98	31	72	83.7	1.87	16	96	7	74	82.6	4.44
Blue Branch, (W)	18	94	10	67	80.2	1.70						
Do..... (G)	7, 17	95	7	72	80.8	2.70						
Lavaca.....	{ 7, 8, 10, 11, 12, 13, 17 }	93	{ 21, 26, 30, 31 }	76	83.2	5.90	16	96	1	78	84.0	1.90
Bluff.....	11, 16, 17	95	22, 29	74	82.9	4.95	22, 23	94	1, 2, 7, 10	76	82.8	1.98
Clinton.....	{ 7, 8, 13, 17, 18 }	96	20	70	82.4	5.75	21	94	3	70	80.7	2.45
Austin.....	{ 3, 7, 13, 14, 15, 16, 17 }	95	8, 31	71	82.2	2.04	22	96	26, 31	72	.....	.....
Lockhart.....	16, 17	95	26	74	83.8	4.50	21, 22	92	30, 31	74	81.6	.....
San Antonio.....	17	101	4	71	79.8	3.72	2	99	31	73	82.6	6.48
Averages.....					82.3	4.24					82.4	3.45
LOUISIANA.												
New Orleans.....	9	93	25	71	79.8	6.00	20	92	31	73	80.6	5.40
Shreveport.....	13	94	9	73	83.4	.....	20, 23	92	30	70	81.2	.....
Cheneyville.....	15	93	2, 19	73	81.2	.....	21, 22	91	20, 31	74	82.0	.....
Averages.....					81.5	6.00					81.3	5.40
MISSISSIPPI.												
Columbus.....	14	97	9	68	82.1	4.66	10, 27, 29	92	31	69	80.7	5.81
Enterprise.....	{ 8, 10, 12, 13 }	101	{ 10, 11, 17, 25, 28 }	73	86.5	3.30						
Philadelphia.....	13, 14, 15	94	8	68	79.9	4.60	19, 20	92	1, 6	70	71.7	2.90
Grenada.....	16	95	5, 9	65	80.2	7.55	10, 19, 25	94	31	62	79.2	3.85
Brookhaven.....	16	95	25	70	81.1	5.20	20	91	31	70	77.7	5.40
Near Brookhaven.	{ 1, 11, 12, 13, 15 }	98	25	68	81.1	9.20	26	95	31	70	80.0	9.10
Holly Springs.....	25, 27, 29	94	16	61	79.9	0.90					.....	2.20
Averages.....					81.5	5.06					77.9	4.88
ARKANSAS.												
Helena.....	16	94	8	68	81.8	.....	13, 19, 28	90	30	69	81.4	.....
Mineral Springs..					.....	.....	3	92	31	60	78.1	4.63
Averages.....					81.8	.....					79.8	4.63
TENNESSEE.												
Elizabethton.....	15	94	9	58	77.2	2.71	8, 25, 26	92	16, 23	64	76.7	4.09
Tasculum Coll'ge.	26	90	8	62	78.2	.....					.....	.....
Knoxville.....	23	91	7	65	78.3	3.50	25	91	31	66	76.7	3.85

Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
TENNESSEE—Con.		°		°	°	<i>In.</i>		°		°	°	<i>In.</i>
Lookout Mount'n.	25, 27	93	8	70	80.5	.....	26	91	{ 1, 16, 17, 31 }	72	78.7	.....
McMinnville.....	27	92	8	62	76.3	.....	8, 25, 27	88	31	65	75.2	.....
Austin.....	27	92	7	64	78.4	7.08	{ 8, 23, 24, 26 }	90	30	58	79.0	4.06
Clarksville.....	16	88	9	62	76.0	5.97	23	88	31	62	74.8	4.28
Trenton.....	27	96	8	62	80.8	1.80	7, 8	95	30, 31	60	79.2	3.40
La Grange.....	15	99	7, 8	71	83.5	1.90	12	94	31	66	79.5	5.00
Averages.....					78.8	3.83					77.5	4.11
KENTUCKY.												
Pine Grove.....	{ 17, 18, 24, 25, 28 }	92	30	62	77.5	4.85	{ 6, 7, 8, 24, 25 }	90	21, 31	60	74.2	4.84
Shelby City.....	17	92	8	66	78.7	5.66						
Near Louisville ..	27	96	8, 30	57	78.9	3.28	8, 25	96	30	52	76.7	2.22
Averages.....					78.4	4.56					75.4	3.53
OHIO.												
Salem.....	16, 24	92	8	60	75.8	3.17	8	92	27	56	74.6	4.20
Staubenville .....	17	92	9	60	77.2	4.83	25	89	21	56	74.4	2.82
Painesville.....	17	90	2	57	71.2	12, 13	9	87	27	50	70.8	3.19
Gilmore.....	17	103	2	63	74.7	2.60						
Milnersville.....	20	93	9, 11, 30	60	75.7	4.90						
Cleveland.....	23	91	3	56	72.3	10.15	19	89	26	50	70.3	2.00
Wooster, (H.).....	17	101	4	61	75.4	.....	8	101	22, 27, 30	59	76.9	.....
Do. (W.).....	17	100	8, 29	64	78.9	.....	24	98	30	50	75.8	.....
Pennsville.....	18, 28	96	8	61	80.6	3.75	6	93	27	54	74.5	2.10
Gallipolis.....	27, 28	96	9	58	78.4	2.99	8	96	17, 22	58	75.0	5.23
Adams Mills.....	17	94	9	59	77.8	3.79	8	94	22	55	75.0	2.58
Oberlin.....	16, 17, 23	96	2	56	74.1	8.90	7, 24	92	27	50	71.2	1.55
Kelley's Island...	23	92	2, 30	64	76.6	6.32	24	88	26	58	75.5	1.52
Sandusky.....	17	93	8, 9	62	75.4	5.28	23	91	26	53	73.3	1.72
North Fairfield ..	17	93	9	59	74.5	4.47	24	92	27	52	72.9	1.25
Carson.....							24	92	26	56	74.7	2.10
Gambier.....	27	90	30	58	73.6	4.12						
Westerville.....	25, 27	93	8, 29	58	77.2	3.33	8	96	22	56	74.3	1.83
North Bass Island	20	96	8	61	75.5	7.00	18	92	26	60	75.2	1.37
Marion.....	26	94	8	59	76.2	2.43	24	93	24, 27	55	72.8	1.70
Hillsboro.....	24, 27, 28	90	8, 30	59	75.5	2.83	8	90	21	56	72.6	3.54
Bowling Green...	17	101	29	57	78.0	6.55	24	96	20	51	75.1	3.85
Kenton.....	20, 23, 25	104	15, 30	70	84.2	3.63	8	96	22, 27	68	77.1	1.90
Bellefontaine.....							6	92	12, 25	59	72.9	3.40
Urbana.....	27	95	29, 30	60	76.3	2.63	24	95	22, 23	58	73.1	2.34
Springfield.....	24, 27	95	29, 30	65	78.9	3.10						
Bethel.....	{ 17, 24, 27 }	94	30	56	77.1	3.25	8	94	20, 30	58	74.7	3.63
Jacksonburg.....	17	94	8, 29	62	77.4	6.65	6	92	21	58	74.7	2.20
Mt. Auburn Inst	27	95	8	66	80.4	2.38	24	93	26	61	77.0	0.56
Cincinnati, (P.) ..	17	100	30	65	82.7	3.21	7	95	{ 16, 21, 27, 31 }	64	77.5	1.10
College Hill.....	17, 27	97	8	65	84.0	1.88	8, 24	97	21	62	78.7	1.06
Averages.....					77.1	4.68					74.5	5.05

Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
<b>MICHIGAN.</b>												
		°		°	°	<i>In.</i>		°		°	°	<i>In.</i>
Detroit .....	20	94	8	58	74.1	6.21	1, 6	91	26, 27	55	72.5	2.20
Monroe City .....	5	99	29	62	78.3	9.13	24	98	13, 26	60	77.5	2.20
Ann Arbor .....	17	94	8	57	74.3	6.36	24, 28	90	{ 13, 20, 26, 27 }	56	70.8	1.36
Alpena .....	25	83	1, 8	56	67.2	3.29	4, 17	82	26	50	66.4	2.57
State Ag'l College .....	16	93	2	59	74.4	8.02	1, 5, 6	90	27, 30	51	70.1	4.53
Litchfield .....	17	90	8	56	71.7	7.63	24	89	14	50	69.5	1.86
Coldwater .....	22	94	8	53	73.1	4.25	24	92	27	45	69.0	1.44
Gra'd Rapids, (H.) .....	23	99	7	58	76.6	0.76	24	90	20	50	74.3	1.61
Do.....(S.) .....	23	92	8	57	73.1	5.55						
Northport .....	10	86	2, 13, 14	54	68.5	10.88	11	82	26	50	66.1	6.13
Pleasanton .....	23	88	7	52	69.4	9.50						
Muskegon .....	{ 15, 17, 21 }	98	8	58	79.4	0.50	24	90	27	52	73.7	5.00
Otsego .....	22	105	31	50	74.1		23	108	31	53	68.2	
Copper Falls .....	18	86	1, 13, 29	50	61.5	2.00	2	79	11	47	61.1	3.41
Ontonagon .....	15, 16	90	5, 6, 7	56	69.0		3, 4	78	11, 19, 31	54	62.6	
Averages.....					72.3	5.70					69.4	2.94
<b>INDIANA.</b>												
Aurora .....	{ 1, 15, 24, 25 }	100	30	60	79.0	3.07						
Vevay .....	27	93	9	61	77.9	3.20	8	94	30, 31	59	75.4	2.55
Mount Carmel .....	17, 24	96	29	61	77.7	3.04	24	94	14, 21	60	75.2	1.55
Spiceland .....	27	96	8	61	78.3	3.15						
Laconia .....	27	95	8	66	78.1	3.80	24	92	39	69	75.0	4.71
Columbia City .....	27	96	30	58	77.2	5.56	24	94	27	52	74.0	2.38
Knightstown .....	27	98	8	61	79.0	1.16	24	96	30	57	67.3	1.77
Warsaw .....	{ 17, 19, 20, 27 }	90	{ 2, 8, 21, 30 }	70	79.8	5.65						1.40
Indianapolis .....	26	92	30	61	77.4	2.84	24	89	21	58	72.8	2.97
Near La Porte .....	25	98	2, 7, 29	62	77.3	5.23	24	96	26	56	72.9	1.83
Rensselaer .....	25	98	7	60	79.0	5.10	24	94	13	55	73.5	2.80
Merom .....	24	98	8	62	83.1	1.60						
Kentland .....	20, 27	91	2, 4, 9	60	73.2	3.59						
New Harmony .....	{ 1, 18, 21, 23, 27 }	93	8	66	80.5	7.00	8, 24	92	31	63	76.5	5.17
Harveysburg .....	21	96	8	58	72.0	3.70	7, 23, 24	90	13	50	70.6	3.00
Averages.....					78.0	3.84					73.3	2.74
<b>ILLINOIS.</b>												
Chicago .....	24	100	8	61	78.9	3.71	24	96	19, 20, 30	60	75.0	2.07
Near Chicago .....	22	100	7	60	79.0		24	98	13, 19	56	74.1	
Evanston .....	22	94	2	56	75.1	4.26	24	92	13	58	71.1	2.28
Marengo .....	19	96	8	53	74.2	4.66	24	92	20	48	68.6	3.79
Charleston .....	27	94	30	63	78.2	4.40	1	92	13	56	72.0	4.34
Mattoon .....	{ 21, 25, 27 }	92	30	60	78.8	2.38	24	90	13	58	73.7	3.81
Aurora .....	4, 22	95	7	57	76.2	5.50	24	92	13	51	69.9	3.31
Louisville .....	21	98	4	62	80.8	6.30	20	98	30	60	75.7	5.10
Galeonda .....	18, 22	102	9	52	80.5	1.50	4	100	15	60	82.8	2.50
Belvidere .....	26	94	30	59	75.2	4.40	24	95	20, 27	53	69.7	2.61
Ottawa .....	25	105	2	66	83.4	1.90	24	99	13	55	72.6	2.26
Decatur .....	20, 21	98	30	61	78.9	1.50	1	92	13	55	72.6	4.60
Pana .....	21	94	30	62	78.5	3.50						
Winnebago .....	19	95	8	57	76.1	3.74	24	93	19	51	70.2	3.74



Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
ILLINOIS—Cont'd.		°		°	°	In.		°		°	°	In.
Wyanet.....	25	105	30	52	84.9	1.91						
Tiskilwa.....	17, 25	102	7, 30	58	78.6							
Hennepin, (S.)...	25	102	30	52	78.0		1, 24	94	14, 20	50	71.0	
Do.....(O.)...	17	105	30	54	80.1		1	97	14, 20	53	74.1	1.25
Elmira.....	16, 20	100	7	58	80.1	0.66	5	93	13	52	71.0	3.15
Peoria.....	25	101	30	61	81.3	0.68	24	94	13	56	74.0	3.26
Springfield.....	22, 25	102	1, 8	64	81.7		24	95	25, 26	60	74.7	
Dubois.....	21	101	30	61	79.0	2.12	6, 24	94	4	59	76.9	3.23
Galesburg.....	{ 20, 21, 25, 26, 27 }	96	7	61	80.0	1.10	23, 24	89	13, 26	58	72.0	3.70
Manchester.....	22	101	7	60	79.7	4.55	1	97	30	54	73.3	5.22
Mount Sterling..	14	95	7	66	82.8	3.50	23	89	13	55	73.5	5.60
Andalusia.....	19, 22	98	30	54	79.0		24	87	26	53	70.9	
Ogawka.....	20	103	8	59	80.6	2.70						
Augusta.....	17, 19, 20	95	7	59	79.5	2.01	5, 24	88	13	53	72.6	5.41
Warsaw.....	16, 25, 27	100	30	62	79.4	1.38	4	97	13	54	71.2	5.23
Averages.....					79.3	2.85					72.5	3.58
WISCONSIN.												
Sturgeon Bay.....	10, 16, 26	87	13	54	71.4	5.30	4	85	26	55	67.6	5.25
Manitowoc.....	26	93	7	54	70.6	4.20	4, 17	87	20	52	67.8	5.73
Hingham.....	26	92	8	54	71.9		24	92	15, 27	54	69.6	
Milwaukee.....	26	96	30	52	72.4	4.64	24	92	27	49	69.0	2.69
Geneva.....	23	96	30	58	74.1	3.23	24	97	20	53	70.1	2.35
Waupacca.....	22	95	{ 1, 6, 7, 8, 13, 14, 15, 23, 29 }	60	73.1		1, 4, 18	89	19	52	64.5	
Embarrass.....	18, 22	92	2, 8, 31	52	70.5	8.53	18	86	26	46	65.3	9.86
Rocky Run.....	23, 26	91	29	58	77.5	7.00	24	90	13, 20	53	68.4	6.63
Madison.....	23, 26	91	7	58	73.8	5.25	24	89	20	56	67.1	3.65
Edgerton.....	18, 22	100	8	59	77.2	6.80	24	96	20	50	72.0	4.30
Mosinee.....	18	93	7	52	69.3	16.32	4, 18	87	20	35	63.3	16.65
Baraboo.....	3, 19, 22	98	2, 7	60	76.2	3.63	4	96	13, 26	54	71.1	6.87
Tunnel City.....	3	93	4	50	69.9	10.30	24	92	19, 20	48	67.8	11.70
Bayfield.....	24	98	3, 29	54	69.7		15	86	20	50	64.3	
Averages.....					72.7	6.84					67.7	6.79
MINNESOTA.												
Afton.....	19	96	7	58	72.9	6.23						
St. Paul.....												
Minneapolis.....	23	96	29	56	72.9	3.85	1	90	19	46	65.5	6.02
Sibley.....	19	97	8	55	73.1	1.74	4	92	12	42	67.5	5.81
Koniska.....	12	89	28	54	69.4	3.30						
Litchfield.....	19	94	6	56	72.7	2.50	4	90	20	43	65.4	3.70
New Uhm.....	19	100	6, 30	58	75.5	2.44	4	100	12	46	67.6	6.95
Madelia.....	19	99	6	55	77.9	3.05	22	95	19	44	68.8	2.95
Averages.....					73.5	3.30					67.0	5.09

Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
IOWA.		°		°	°	<i>In.</i>		°		°	°	<i>In.</i>
Clinton .....	26	97	12	58	77.9	3.00	24	94	14, 26, 30	56	72.1	3.20
Waukon .....	19	93	7	55								
Dubuque .....	25	100	30	58	77.9	1.83	5, 24	95	20	51	70.8	4.30
Monticello .....	25	101	7	59	78.2	5.25	5	98	20	50	70.4	3.65
Bowen's Prairie ..	3	98	6, 7, 12	58	74.8	5.00	5	96	12, 20	50	70.2	3.00
Fort Madison .....	19	105	30	63	82.0	1.60	5, 23	91	13, 26	52	72.0	6.50
Guttenberg .....	26	99	30	50	74.1		22	99	20	43	67.8	
Mount Vernon .....	19, 23, 25	98	8, 12	54	75.8		24	95	20	49	69.6	
Iowa City .....	{ 22, 23, 24, 25, 26 }	100	7	55	78.3	1.85	2, 5, 24	96	20	50	70.9	5.83
Independence .....	{ 19, 22, 23, 25, 26 }	99	7	59	78.0	6.23	5	97	19, 20	51	70.2	4.13
Near Independence ..	26	98	7	60	77.9	6.60	24	97	19	52	71.0	5.30
Waterloo .....	26	101	29	54	78.4	1.20	4, 5, 24	98	19, 25	50	72.2	7.50
Rockford .....	19, 22, 23	92	6	54	77.2		18, 24	90	20	46	68.0	
Algona .....	26	97	6	55	75.0		22	89	19	43	67.1	
West Bend .....	26	98	6	52	75.7		18	92	20	44	65.2	
Webster City .....	24	100	7	55	76.6	1.07						
Boonesboro .....	15	99	7	57	77.9	3.06	2, 5, 24	90	19, 26	42	66.3	6.12
Fontanelle .....	24	100	7	59	79.4	2.56	5	95	19	47	69.8	13.09
Grant City .....	12	104	6	57	80.5	2.12	18, 22	98	19	47	70.7	2.60
Logan .....	15, 23	96	7, 8	54	75.8	7.00	2, 23, 31	87	19	42	66.5	1.80
Woodbine .....	4	102	7	56	77.6	4.31	2	94	19	43	67.5	1.29
West Union .....	22	98	30	60	77.3	6.80	24	94	20	50	70.7	6.01
Averages .....					77.6	3.72					69.5	4.95
MISSOURI.												
St. Louis Univ. ....	22, 25, 27	94	3	62	76.8	1.81	24	93	14	61	75.5	6.05
Allenton .....	27	100	8	57	77.6	3.67	6	98	30	53	73.5	5.99
Hematite .....	21	100	8	62	80.4	4.41	11	96	30	59	77.0	4.56
Hannibal .....	22	95	7	59	79.5	6.00	5, 23	90	13	54	73.0	6.70
Rolla .....	22	97	7	61	70.8	3.99	6, 21	92	29	63	73.6	5.64
Jefferson City .....	17	98	7, 9	64	80.0		5	96	13, 30	60	76.7	
Kansas City .....	17, 20, 24	96	7	60	79.2	3.75	6	95	13	54	74.1	5.83
Harrisonville .....	4	101	6, 7, 9	64	80.7	2.09	4, 5, 6	98	13, 14	56	73.9	7.49
St. Joseph .....							5	95	13	54	74.7	8.30
Oregon .....	15, 22, 24	98	7	57	80.3	0.76	2, 5	96	19	50	71.8	8.44
Corning .....							5	98	19	49	72.6	4.40
Averages .....					79.4	3.31					74.7	6.34
KANSAS.												
Atchison .....	20, 26	100	7	61	81.8	2.05	5	101	13, 19	53	73.1	13.10
Williamstown .....							5	95	13, 19	54	76.3	8.55
Leavenworth .....	17	100	7	58	79.8	3.12						
Olathe .....	17	102	7	60	79.6	6.55	1, 2	100	13	53	74.7	7.75
Paola .....	17	100	7, 8	62	80.6	3.10	5	101	13	55	74.7	8.36
Baxter Springs .....	1, 5	99	7, 8	72	84.9	3.00	3	100	25	64	88.8	9.50
Lawrence .....	17	99	7	60	80.3	5.58	3, 5	98	13	53	73.5	6.69

Table showing the range of the thermometer, &amp;c., for July and August—Continued.

State and station.	JULY, 1870.						AUGUST, 1870.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain-fall.
KANSAS—Cont'd.		°		°	°	<i>In.</i>		°		°	°	<i>In.</i>
Holton.....	24	106	6	62	84.4	1.00	25	102	19	52	73.1	11.13
State Ag'l College	14, 15	102	10	65	84.9	2.98	5	99	19	52	72.9	5.21
Council Grove....	13, 14, 17	100	7	60	82.7	1.90	2	102	19	52	75.4	5.70
Averages.....					82.1	3.25					75.8	8.44
NEBRASKA.												
Omaha Agency ..	26	102	6, 29	59	80.0	2.34	22	93	19	50	69.4	1.53
Bellevue.....	26	96	6, 7	62	82.1	2.00	2, 5	91	19	50	69.9	3.60
Nebraska City...	15	98	7	60	79.3	2.63	5	96	19	48	70.4	4.10
New Castle.....	14, 19, 22	102	29	61	79.8	.....	4	100	19	50	69.7	.....
De Soto.....							23	94	12, 19	49	69.3	2.39
Averages.....					80.3	1.74					69.7	2.32
UTAH TERRITORY.												
Coalville.....	21	95	10	55	72.5	.....	3, 4, 9	90	25	42	68.2	.....
CALIFORNIA.												
Monterey.....	2, 3	90	8	55	64.4	.....	3	90	29	51	67.8	.....
Chico.....	3	116	15	66	86.7	.....	3	116	19	60	82.2	.....
Watsonville.....	1, 2	98	30	58	67.0	.....	22	85	23	56	67.0	.....
Cabto.....	3, 4	106	14	57	78.0	.....						
Visalia.....	3	103	16	70	85.4	.....	4	105	27	64	82.6	.....
Averages.....					76.3						74.9	
MONTANA TERR'Y.												
Deer Lodge City	27, 28, 29	89	26	48	67.0	0.28	3, 4	88	18	32	56.4	0.68
WASHINGTON TER.												
Port Angelos ....	5	88	18	54	62.4	0.84						
Seattle.....	6	104	15	56	74.0							
Cathlamet.....	4	103	24	50	63.7							
Averages.....												
COLORADO TERR'Y.												
Denver City.....	18	98	6	53	74.2	0.51	2	97	11	45	64.8	0.12



# STATE AVERAGES FOR JULY AND AUGUST, 1870.

*Table showing the highest and lowest temperature, (with dates prefixed,) the average mean temperature, and average rain-fall (in inches and tenths) of each State, for July and August, 1870.*

State]	JULY, 1870,						AUGUST, 1870.					
	Date.	Maximum tem- perature.	Date.	Minimum tem- perature.	Average tem- perature.	Average rain- fall.	Date.	Maximum tem- perature.	Date.	Minimum tem- perature.	Average tem- perature.	Average rain- fall.
		°		°	°	In.		°		°	°	In.
Maine .....	24	100	1	52	71.9	2.54	9	95	27	44	69.0	3.08
New Hampshire.	23	100	1	50	72.1	2.11	9	101	27	38	69.1	2.93
Vermont.....	24	96	1	48	73.5	3.28	9	97	27	42	68.6	3.21
Massachusetts...	23, 24	100	3	52	73.9	2.66	4	100	27	44	74.2	3.07
Connecticut .....	17	98	4	55	74.4	2.76	7	97	27	43	72.8	2.53
New York.....	17, 19	99	2, 30, 31	52	73.9	3.84	11	100	27	39	71.2	3.70
New Jersey.....	18	101	4	56	77.9	4.32	6, 25	97	31	52	75.2	4.51
Pennsylvania....	17	99	10	51	73.1	4.46	8	97	27	38	73.5	4.73
Maryland.....	17	98	3	58	78.4	4.36	25	92	27	58	75.8	2.96
Virginia.....	16	107	9	57	79.3	3.35	10, 25	100	27	57	77.3	2.42
West Virginia...	17	102	31	56	78.4	7.30	8	100	21, 22	58	75.2	.....
North Carolina..	28	101	9	56	78.6	6.90	26	100	23	58	76.3	5.07
South Carolina...	28	98	30	70	83.3	3.37	25, 26	94	16	68	81.0	3.36
Georgia.....	28	98	8	66	81.7	1.82	26	96	25	68	79.9	1.77
Alabama.....	14	98	9	64	82.2	5.60	25	98	2	70	80.5	5.05
Florida.....	3, 4	98	9	70	82.5	5.08	{ 1, 2, 7, 11 } { 12, 20, 23 }	96	24	70	82.8	2.69
Texas.....	17	101	10	67	82.3	4.24	2	99	3, 31	70	82.4	3.45
Mississippi.....	{ 8, 10, } { 12, 13 }	{ 101 } { 101 }	16	61	81.5	5.06	26	95	31	62	77.9	4.88
Tennessee.....	15	99	9	58	78.8	3.83	7, 8	95	30	58	77.5	4.11
Kentucky.....	27	96	8, 30	57	78.4	4.56	8, 25	96	30	52	75.4	3.53
Ohio.....	20, 23, 25	104	2, 3, 30	56	77.1	4.68	8	101	26, 27, 30	50	74.5	5.05
Michigan.....	22	105	{ 1, 13, } { 29, 31 }	50	72.3	5.70	23	108	27	45	69.4	2.94
Indiana.....	{ 1, 15, } { 24, 25 }	{ 100 } { 100 }	8, 30	58	78.0	3.84	24	96	13	50	73.3	2.74
Illinois.....	17, 25	105	9, 30	52	79.3	2.85	4	100	20	48	72.5	3.58
Wisconsin.....	18, 22	100	4	50	72.7	6.84	24	97	20	35	67.7	6.79
Minnesota.....	19	100	28	54	73.5	3.30	4	100	12	42	67.0	5.09
Iowa.....	19	105	30	50	77.6	3.72	22	99	19, 26	42	69.5	4.95
Missouri.....	4	101	7, 8	57	79.4	3.31	4, 5, 6	98	19	49	74.7	6.34
Kansas.....	24	106	7	58	82.1	3.25	2, 25	102	19	52	75.8	8.44
Nebraska.....	{ 14, 19, } { 22, 26 }	{ 102 } { 102 }	6, 29	59	80.3	1.74	4	100	19	48	69.7	2.32
California.....	3	116	8	55	76.3	.....	3	116	29	51	74.9	.....
Dist. of Columbia.	17	94	9	67	79.5	4.80	4	89	27	63	76.9	2.05

## NOTES OF THE WEATHER—JULY, 1870.

*Houlton, Me.*—Slight frost, injured tender leaves only, 1st.

*Orono, Me.*—Damaging tornado 14th. Much damage by lightning this month.

*Williamsburg, Me.*—Bright aurora about midnight 27th.

*West Waterville, Me.*—Mean heat  $3.84^{\circ}$  above average of six Julys, and  $4.31^{\circ}$  above last July; rain-fall 1.43 inches less than July average of six years.

*Gardiner, Me.*—Auroras 19th, 23d, 27th, 30th July; mean heat for thirty-four years,  $69.088^{\circ}$ ; this,  $70.684^{\circ}$ ; rain for May, June, July, average of thirty-four years, 10.98 inches; this, 6.26 inches.

*Lisbon, Me.*—Thunder-storm and severe hail 14th; haying finished 30th.

*Norway, Me.*—Cutting grass 9th, oats 19th; wells failing for first time 28th; ground dry two feet deep 29th. Driest and hottest July known.

*Cornishville, Me.*—July average heat for forty years  $67.16^{\circ}$ ; this year,  $74.01^{\circ}$ .

*Stratford, N. H.*—Corn silking 12th. Month hot; small streams dried up.

*Whitefield, N. H.*—Raspberries 12th; cutting wheat, oats not yet ready, 31st

*Tamworth, N. H.*—Continued drought 1st; grass drying up 16th; auroras 18th, 30th; slight rain 29th.

*Goffstown, N. H.*—Warmest July I ever knew, and severe drought.

*Lunenburg, Vt.*—Very dry till 28th, and month very warm.

*North Craftsbury, Vt.*—Furious wind and rain 8th; thunder-storm, high windy 24th. Since May thermometer at  $80^{\circ}$  and above on thirty-two days.

*East Bethel, Vt.*—Basswood blossoms 8th; early apples 28th; refreshing rain 29th. Except in 1863, the hottest July for many years.

*Woodstock, Vt.*—Thunder-storm, hail, 14th; warm month, little rain, streams very low.

*West Charlotte, Vt.*—Auroras, crimson, 2d, 3d, 5th, 10th, 13th, 16th, 25th, and with beams 31st; cherries ripe 9th.

*Panton, Vt.*—Auroras 15th, orange and crimson 25th, crimson 27th; haying finished, harvesting nearly done, 31st.

*Castleton, Vt.*—Intense red and green meteor 22d; rain ending, (we hope) a very severe drought 29th.

*Topsfield, Mass.*—Very bright aurora 27th. Many springs dry. Merri-mac River  $83^{\circ}$ ;  $4^{\circ}$  warmer than ever known.

*Cambridge, Mass.*—Auroral lights 18th, 19th; light showers 20th, 29th.

*North Billerica, Mass.*—Heavy wind and rain 8th; corn in tassel 17th. Hot and dry—no rain since 8th inst.

*Lunenburg, Mass.*—Except 1868, the hottest July since 1842.

*Newport, R. I.*—Very dry, no rain nor sea-fogs.

*Southington, Conn.*—Cutting oats 20th; bank swallows gone 28th; aurora 30th. Drought, wells and springs low and grass dry.

*Moriches, N. Y.*—Drought severe; little rain since March.

*North Hammond, N. Y.*—July closes hot, dry; scarcely any green herbage.

*Houseville, N. Y.*—Aurora 18th; thunder-storm, hail, 24th.

*Leyden, N. Y.*—Aurora 18th. No lightning all summer till 15th, since frequent and sharp. Severe drought.

*Utica, N. Y.*—Auroras 18th, 29th; heaviest rain this year 29th.

*South Trenton, N. Y.*—Fine month for haying; harvest half over 31st.

*Depauville, N. Y.*—Auroras 6th, 19th, 27th, 30th; on 21st, 1.30 to 2.45 a. m., an electric storm of continuous bright flashes all over the sky, without thunder, and only a few drops of rain. Month hot and dry.

*Palermo, N. Y.*—Several thunder-storms 27th, first copious rain since March. Such steady heat not remembered in seventeen years.

*North Volney, N. Y.*—Continued drought; much lightning and thunder.

*Himrods, N. Y.*—Month  $5^{\circ}$  warmer than last year; thunder-showers on twenty-one days.

*Rochester, N. Y.*—Terrific thunder-storm 20th; shooting stars in all directions 27th.

*Lockport, N. Y.*—Aurora 18th; thunder-storm, hail, 20th.

*Buffalo, N. Y.*—Month only  $0.8^{\circ}$  above its average for twelve years.

*Newark, N. J.*—Month nearly  $2^{\circ}$  warmer than average of twenty-seven Julys, but not as warm as in 1854, 1866, and 1868. Much rain in month.

*New Germantown, N. J.*—Seasonable rains, good farming weather, great amount of electric display, light winds.

*Newfield, N. J.*—Wheat harvest 1st; corn tasseling 20th; katyids 26th. But little rain; heat above  $90^{\circ}$  on fifteen consecutive days—14th to 29th.

*Greenwich, N. J.*—Cool enough for fires 2d to 5th. July mean temperatures, 1864,  $74.36^{\circ}$ ; 1868,  $78.69^{\circ}$ ; 1870,  $77.94^{\circ}$ —average for six years,  $75.81^{\circ}$ .

*Fallsington, Pa.*—Very warm July, eight days  $90^{\circ}$  and above.

*Plymouth Meeting, Pa.*—Oats harvest 19th. Month  $2.1^{\circ}$  above July average of six years, and  $1.6^{\circ}$  below 1866, and  $1.8^{\circ}$  below 1868.

*Factoryville, Pa.*—Good farming weather, but too many grasshoppers.

*Tamaqua, Pa.*—Terrific wind, with rain, tearing up trees, &c. 7th.

*Catawissa, Pa.*—Thunder-storms numerous, one with hail on 18th.

*Carlisle, Pa.*—Corn in tassel 4th; blackberries 11th; violent thunder-storm 12th.

*Fountain Dale, Pa.*—July not as hot as in 1868, but drier.

*Tioga, Pa.*—Good harvest weather and for growing crops.

*Grampian Hills, Pa.*—Corn in tassel 12th; wheat harvested 23d; cutting oats 28th. Month warm and showery, damaging hay.

*Franklin, Pa.*—Frequent showers, but no damage to vegetation.

*Pittsburg, Pa.*—Frequent, heavy, and damaging thunder-storms.

*Greencastle, Pa.*—Cool nights, warm days, 8th to 11th; tornado, light rain 20th; great drought 31st.

*Connellsville, Pa.*—More rain in same time than in several years 28th. Mean temperature of July 1868 and 1870 the same— $77.77^{\circ}$ .

*Emmitsburg, Md.*—Very dry and warm in middle of month.

*Zuni Station, Va.*—Many cases of sunstroke; unusual here.

*Surry Court House, Va.*—Hale's early peach 13th; katyids 18th. Till 10th rainy and mild; after that fair and warm last part dry. July means, 1868,  $82.5^{\circ}$ ; 1869,  $82.9^{\circ}$ ; 1870,  $85.4^{\circ}$ .

*Comorn, Va.*—Trumpet flower 1st; althea 7th; oat harvest 11th. Average rain in July for twenty-one years, 3.88 inches; this July, 3.97 inches.

*Romney, W. Va.*—A hot summer; July had four days of  $100^{\circ}$  and above.

*Statesville, N. C.*—Tornado, with thunder and lightning, 26th.

*Bluffton, S. C.*—Month very dry, last part hot; crops suffering.



*Bluff, Ala.*—Thunder-showers here on seven days; distant on nine other days.

*Coatopa, Ala.*—Lightning, mostly with thunder, often with rain, on twenty days.

*Manatee, Fla.*—July mean temperature, 1869, 84°; 1870, 83°; rain, 1869, 7.8 inches; 1870, 11 inches.

*Gilmer, Tex.*—Katydid 2d; heaviest rain known here 29th, continued with freshets 30th, 31st. Month dry till 19th.

*Blue Branch, Tex.*—First part of July dry, last half showery and remarkably cool.

*Lavaca, Tex.*—On 10th, at sunset, a brilliant azure bow, like a rainbow.

*San Antonio, Tex.*—Shower from southeast 10 minutes, then thunder-shower from north, 20 minutes; in the 30 minutes thermometer fell 32°.

*Brookhaven, Miss.*—Watermelons 4th, peaches 10th, 2d crop figs 20th; whippoorwills ceased calling 25th; large hail from southeast 25th. Not one entirely clear day in July.

*Elizabethton, Tenn.*—Like June, very cloudy and rainy.

*Lookout Mountain, Tenn.*—Very dry till rains on 31st.

*Clarksville, Tenn.*—Air moist and hot for some days; feels like a vapor bath 11th.

*Salem, Ohio.*—Rain on fourteen days, but grain not damaged.

*Stenbenville, Ohio.*—Thunder, with heaviest rain ever known here, 1st.

*Painesville, Ohio.*—More rain, thunder, and lightning than ever known in July.

*Gilmore, Ohio.*—Katydid 12th; aurora 18th; potato bugs at work 24th.

*Cleveland, Ohio.*—July averages for sixteen years—temperature 72.61°, rain 3.26 inches; this year temperature 72.28°, rain 10.15 inches.

*Kelley's Island, Ohio.*—Thunder-storm 24th, lightning struck a post in a vineyard, followed the vines, and destroyed the whole row.

*Westerville, Ohio.*—Shower 6th, pouring rain 7th; thunder-shower, wind, hail, ending in a steady rain, 28th.

*North Bass Island, Ohio.*—Heavy, damaging hail 8th. Rain on twelve days; intense electric action all the month.

*Bowling Green, Ohio.*—Many and brilliant electric displays in July.

*College Hill, Ohio.*—Shooting stars 25th, 27th, 29th, to southwest, wind northeast.

*Ann Arbor, Mich.*—Frequent rains damaged much wheat.

*Alpena, Mich.*—Kingfisher 20th; humming bird 26th; corn tassels 31st.

*Lansing, Mich.*—Rainiest July in many years; June and July 15.29 inches.

*Litchfield, Mich.*—Heaviest thunder-shower in four years 6th, (2 inches in 15 minutes.) Thunder and chain lightning on twenty-three days, wheat not damaged.

*Northport, Mich.*—Heavy thunder, much rain and hail 23d.

*Vevay, Ind.*—Thunder, vivid lightning, sleet and drenching rain 1st, showery to 15th; uncommonly violent storm 21st.

*La Porte, Ind.*—Violent storm, hail, 13th, and thunder, high wind, 27th.

*New Harmony, Ind.*—Month 3.5° below July, 1868, but more oppressive because "temperature of evaporation" was very high—the wet bulb ranging 80° to 85° from 15th to 28th.

*Harveysburg, Ind.*—The most seasonable month known here.

*Marengo, Ill.*—Copious thunder-shower 14th, ended drought of only 3.59 inches rain in one hundred and four days; cutting wheat 15th.

*Mattoon, Ill.*—Grain cut, peaches ripening 25th. A dry month.

*Aurora, Ill.*—Thunder, heavy rain, hail 14th; warmest fortnight in twenty years 15th to 28th.

*Louisville, Ill.*—Wheat harvested 4th, oat harvest began 5th.

*Golconda, Ill.*—Very dry, till rain of 27th saved the crops.

*Belvidere, Ill.*—Copious rains 13th, 14th; hail 15th. Very hot.

*Ottawa, Ill.*—Fearful tornado, twisted off trees and destroyed lives 17th.

*Decatur, Ill.*—Driest summer known here, and hottest ever wanted!

*Tiskilwa, Ill.*—Terrible heat and longest drought in twenty-five years.

*Hennepin, Ill.*—Great drought, heat 90° and over on twenty-one days. (S.)—Very little due all summer, and eight days at temperature of 100° and over. (O.)

*Dubois, Ill.*—Terrific thunder-storm and destructive tornado 13th; katydid 14th. Month 3.5° warmer than July average of six years.

*Mt. Sterling, Ill.*—Thunder, no rain, severe gale, damaging trees, corn, &c., 13th. July nearly 10° warmer than last year.

*Andalusia, Ill.*—Very dry month, a few very slight showers.

*Manitowoc, Wis.*—Eighteen thunder-storms on twelve days.

*Hingham, Wis.*—A wet month for haying.

*Geneva, Wis.*—Barley and oat harvest 27th; wheat harvest 28th.

*Embarrass, Wis.*—Tornado, with thunder-storm, 13th; hardest rain in fifteen years, with hail, 19th; thunder-storm, hail, freshet 22d, 23d.

*Rocky Run, Wis.*—Auroras 28th, 31st. Much rain, thunder, &c.

*Edgerton, Wis.*—No rain from March 26 till June 30; driest and hottest summer in twenty-two years.

*Mosinee, Wis.*—Auroras 1st, 14th, 15th, 24th; thunder-storms, with gale, 13th; 24th, with hail; freshet 19th; fine harvest weather 30th.

*Tunnel City, Wis.*—Dreadful thunder-storms, sweeping freshets 13th, 14th, 15th, 16th, 17th, destroying fences, hay, &c.

*Koniska, Minn.*—Pleasant month, but dry in early part.

*New Ulm, Minn.*—Thunder-storm, hail, 23d; shooting stars 25th.

*Clinton, Iowa.*—Except heavy thunder-storm on 14th, July very dry, and hottest month in two years.

*Waukon, Iowa.*—No rain since May till severe thunder and destructive hail storm of 14th; most rain in one storm this year, and hail 15th.

*Dubuque, Iowa.*—Several months dry and hot, but our porous soil stands drought well.

*Fort Madison, Iowa.*—Cutting winter wheat 2d, rye 3d, meadow grass 5th, spring wheat 13th, oats 14th. Severest drought known here.

*Guttenberg, Iowa.*—Rain last night filled our empty cisterns 15th.

*Iowa City, Iowa.*—Hot June and July; mean temperature 84.68° from 13th to 27th; the longest and highest "heated term" in thirty-two years; July average of that time for those years being only 72.51°.

*Rockford, Iowa.*—Terrible thunder, copious rain, 14th, 15th; ended the greatest drought in my sixteen years' residence here.

*Algona, Iowa.*—Good thunder-storm ended drought 26th. Hottest month known here.

*Boonsboro, Iowa.*—Month 6.11° hotter than July average of fourteen years, and April, May, June, and July 6° warmer than their average for same years.

*Logan, Iowa.*—Severest thunder for years, and heavy rain 27th.

*West Union, Iowa.*—Severe thunder-storms 15th, 16th, 17th, with hail 24th.

*Hematite, Mo.*—Severe thunder-storm, with hail, 5th, katydids 17th.  
*Rolla, Mo.*—This July 5° hotter than last, and 5° colder than in 1868.  
*Jefferson City, Mo.*—First drenching rain since April 10.  
*Oregon, Mo.*—Auroras 1st, 28th; cutting spring wheat 5th, oats 7th.  
*Atchison, Kans.*—Mean temperature 3.4° above July average for seven years; rain 2.7 inches less than the average for six years.  
*Lawrence, Kans.*—Above 90° on twenty-two days. Rain from March 1 to August 1, 1870, 12.86 inches; 1869, 19.84 inches; 1868, 17.07 inches.  
*Holton, Kans.*—Hottest and driest July known here; heat 90° and above on twenty-five days, and 100° and above on nine days.  
*Manhattan, Kans.*—Hottest month on our record of ten years.  
*Bellevue, Nebr.*—Month dry, and 8° warmer than in 1869.  
*Harrisburg, Utah.*—Heavy rain, freshet 8th; thunder-storm 24th.  
*Coalville, Utah.*—Myriads of locusts through July.  
*Cahto, Cal.*—Brilliant meteors 4th, 23d; wheat harvested 25th.  
*Chico, Cal.*—Heat above 90° every day; 100° and above on twenty-one days.

*Visalia, Cal.*—Heat above 90° on twenty-nine days, and 100° or more on five days.

*Cathlamet, Wash.*—Heat scorched the tender leaves of shrubbery, and cooked gooseberries on the bushes.

#### NOTES OF THE WEATHER—AUGUST, 1870.

*Mt. Desert, Me.*—Hot and dry; fires in woods in all directions.

*Williamsburg, Me.*—Auroras, 22d, 24th; frost, 27th—damage on low grounds.

*West Waterville, Me.*—Swallows left 20th; auroras 22d, 24th, 28th.

*Gardiner, Me.*—Auroras 2d, 4th, 22d, 26th, 27th, 28th, 30th, 31st, bright 19th, 21st, 24th. First three weeks hottest known here in August. August average for thirty-four years, 67.018°; this, 67.785°.

*Lisbon, Me.*—Auroras 21st, 27th, 31st; frost kills vines 27th.

*Norway, Me.*—Cutting rye 3d, oats 6th; frosts 16th, 26th; aurora 19th.

*Cornish, Me.*—Auroras faint 18th, beams 24th, and corona 19th.

*Cornishville, Me.*—Auroras 19th, 20th; frost 27th. Average August temperature for forty years, 64.143°; this, 71.66°. The hottest summer known here.

*Stratford, N. H.*—Frosts, slight, 16th, killed buckwheat 27th.

*Whitefield, N. H.*—Slight frosts 16th, 27th; auroras 20th, 22d, bright 19th.

*Tamworth, N. H.*—Frosts, with ice, no injury, 16th, killed vines 27th; auroras 18th, 20th, 21st, 24th, grand 19th, very bright 31st. Severe long drought.

*Goffstown Center, N. H.*—Bright auroras 19th, 28th. Warmest August and severest drought known here.

*Lunenburg, Vt.*—Auroras nearly every evening, and very bright.

*North Craftsbury, Vt.*—Auroras 24th, 26th, 27th, 28th; slight frost 27th.

*Newport, Vt.*—Auroras 19th, 20th, 21st, 24th, 26th, 28th, 29th, 30th.

*Randolph, Vt.*—Bright aurora 19th; cutting up corn 20th. Summer average temperature for five years; 67.70° this, 71.1°. August, five years, 66°; this, 67.3°.

*Woodstock, Vt.*—Aurora, double arch, cloud-like streamers, waves of light flashing to zenith, 19th; slight frost 27th. Wells and streams nearly dry.

*West Charlotte, Vt.*—Auroras 20th, bright crimson 13th, red 22d. Drought.



*Panton, Vt.*—Brilliant aurora 19th; very heavy dew 31st.

*Kingston, Mass.*—First rain in twenty-eight days 10th; red aurora, arch, 19th.

*Georgetown, Mass.*—Heavy rain, ended severe drought, 11th; shooting stars 16th, 18th, 19th; bright auroras 19th, 28th; frost reported 27th.

*North Billerica, Mass.*—Grass dead, trees dying, 9th; rain 10th, 14th; bright aurora 19th. Springs low. A dry, hot summer.

*Lunenburg, Mass.*—Brilliant aurora 19th; white frost 27th. Warmest August on my record, mean  $73.03^{\circ}$ ; in 1869,  $67.13^{\circ}$ ; average thirty-one years  $68.55^{\circ}$ ; this summer mean  $72.81^{\circ}$ ; warmest in ninety-two years.

*Amherst, Mass.*—Auroral arch, then flashing streamers, 19th.

*Middletown, Conn.*—Brilliant aurora 19th; frost on low ground 27th.

*Southington, Conn.*—Bright aurora 19th. Summer mean temperature,  $73.5^{\circ}$ .

*Moriches, N. Y.*—Auroras, bright 19th, dull 20th; thunder-storm, with wonderful displays of lightning, 25th.

*South Hartford, N. Y.*—Tremendous rain, and hail two inches deep, doing much injury, 6th; brilliant auroras 19th, 21st; light frost 27th.

*Caldwell, N. Y.*—Heavy rain, more than in all July, 3d; auroras 4th, 30th, brilliant 19th; splendid meteor in east 11th.

*Garrison's, N. Y.*—Month dry; streams low, some dried up.

*New York City.*—Auroras 19th, 28th, 29th, 31st. June not as warm as in 1860 and 1865; nor July as in 1864, 1865, 1866; nor August as in 1863, 1864. Summer mean, 1870, ( $76.434^{\circ}$ ), is  $1.502^{\circ}$  below 1864,  $0.962^{\circ}$  below 1865, and  $3.905^{\circ}$  above average of ten last summers, and  $3.782^{\circ}$  above average of twenty-five last summers, of which twenty-five 1865 was the warmest, and 1849 the coldest.—(*Prof. O. W. Morris.*)

*Brooklyn, N. Y.*—Beautiful white, pale blue, and amber aurora 19th.

*Glaseo, N. Y.*—Aurora 19th; heavy thunder-storm 25th; lightning killed several persons in Kingston.

*Cooperstown, N. Y.*—Light frost 27th; springs low. Month favorable for crops.

*North Hammond, Y. Y.*—Terrible drought; fires in wood and field; stock suffering for food and drink. Hottest season ever known here.

*Houseville, N. Y.*—Auroras 18th, 19th, 30th. Streams low or dry.

*Utica, N. Y.*—Heavy rain, wind, and severest lightning and thunder known here 8th; much damage by flood and lightning; auroras 18th, 25th.

*South Trenton, N. Y.*—Terrific storm, pouring rain, sharp lightning, floods 8th; slight frost 27th. Hottest August in sixteen years.

*Oneida, N. Y.*—Severe thunder-storm 8th; another 9th—10 inches rain.

*Depauville, N. Y.*—Auroras 4th, 18th; shooting stars 4th; corn ripe 20th. Spring and summer rain-fall in 1869 20.34 inches; in 1870, 12.39 inches.

*North Volney, N. Y.*—Aurora 30th. Summer mean, 1870,  $72.75^{\circ}$ .

*Newark Valley, N. Y.*—Frost 27th. Ground very dry—crops suffering.

*Himrods, N. Y.*—Auroras, brilliant 19th, like fire-waves passing over the whole sky 20th. Severest drought since 1854.

*Buffalo, N. Y.*—Bright aurora 20th; terrific thunder-storm and tornado 29th. Month  $2^{\circ}$  and summer  $2.5^{\circ}$  above their averages of twelve years.

*Newark, N. J.*—Auroras, beautiful 19th, bright 20th; thunder-storm with heavy rain; many persons killed by lightning 25th. This summer  $1.25^{\circ}$  above any since 1843, and nearly  $3^{\circ}$  above the average of the twen-

ty-seven—the mercury fell lower in all, but rose higher in fourteen, and in twelve there were more days above 90°.

*Trenton, N. J.*—Terrific thunder-storm 10th; the air was sulphurous with lightning; many places were struck, but no fires nor loss of life.

*Rio Grande, N. J.*—Very dry August; much thunder, but little rain.

*Haddonfield, N. J.*—Severe tempest, heavy rain 11th; auroras 19th. very fine, extending to zenith 20th.

*Greenwich, N. J.*—Yesterday drought, to-day ground saturated, 10th; beautiful crimson aurora 19th.

*Hamlinton, Pa.*—Bright aurora 19th; frost severe on low ground 26th.

*Fallsington, Pa.*—The warmest August in twenty-one years.

*Horsham, Pa.*—Bright aurora, beams to the zenith, 19th.

*Factoryville, Pa.*—Auroras, streamers 19th, faint 20th. Severe drought.

*Carlisle, Pa.*—Splendid aurora 12th; meteor of great size and beauty 16th.

*Tioga, Pa.*—Beautiful aurora 20th; frost kills some buckwheat 27th.

*Grampian Hills, Pa.*—Corn silking 1st. Season favorable for crops.

*Franklin, Pa.*—Brilliant aurora 20th. August means, 1868, 69.13°; 1869, 69.64°; 1870, 69.89°. Summer mean, 1870, 71.05°.

*Green Castle, Pa.*—Numerous shooting stars from E. to W. 3d.

*New Castle, Pa.*—Beautiful aurora 19th. Frequent thunder-showers.

*Woodlawn, Md.*—Auroras 19th, 20th; very smoky 21st, 22d, 23d.

*Johnsontown, Va.*—Auroras, 19th, 20th. Ground not wetted in fifty-four days.

*Hampton, Va.*—Drought continues. Month 2° warmer than in 1869.

*Surry, Va.*—Auroras, faint white 7th, bright white and red 19th. Month and summer hot and dry; but one good rain, (on 14th,) frequent slight showers.

*Wytherville, Va.*—Katydid 9th; brilliant aurora 19th. Twenty rainy days, damaged hay, &c. Farmers plowing for wheat sowing.

*Romney, W. Va.*—Aurora 19th. Hot summer, but good for crops.

*Albemarle, N. C.*—Aurora, white beams and flashes, 20th. Drought.

*Goudysville, S. C.*—Auroras 19th, 20th. Rains light here, more elsewhere.

*Bluffton, S. C.*—Month warm; fair amount of rain. Picking cotton.

*Penfield, Ga.*—Aurora for thirty minutes, deep red, 19th.

*Pilatka, Fla.*—Month hot and dry—only two light showers.

*Clarksville, Tex.*—Month cooler and more equable than in many years.

*Lockhart, Tex.*—Seasonable rains during the month.

*Elizabethton, Tenn.*—Brilliant aurora 19th. Month damp and cloudy, as were June and July.

*La Grange, Tenn.*—Beautiful auroras, beams, column, 19th, 20th.

*Wooster, Ohio.*—Auroras 19th, 20th, 22d, 24th, 25th, 28th, and meteors 19th, and two meteors 30th.

*Adams Mills, Ohio.*—Auroras, bright 19th, slight 20th, 21st; lightning like globes of fire 23d.

*Kelley's Island, Ohio.*—Auroras bright, to zenith 20th, 21st, diffused 28th, 29th.

*North Fairfield, Ohio.*—Auroras, bright 19th, brilliant 20th, rainbow colors 24th. Drought continues.

*North Bass Island, Ohio.*—Bright aurora, arch, beams, corona, 20th. Long drought.

*Bowling Green, Ohio.*—Auroras 19th, 20th. Ground too dry for plowing.

*Urbana, Ohio.*—Aurora 18th, 25th. Month  $1.72^{\circ}$  above its average for eighteen years—rain considerably less than the average.

*Detroit, Mich.*—Auroras, bright beyond zenith 20th, faint 24th.

*Alpena, Mich.*—Auroras, flashes beyond zenith 20th, fine 24th.

*Northport, Mich.*—Aurora 19th. Ground full of water; warm yet.

*Copper Falls, Mich.*—Auroras always frequent here, but on 19th were deep red, with abundant streamers extending beyond the zenith.

*Ontonagon, Mich.*—June and July were very dry, August quite wet.

*Veray, Ind.*—Grapes drying up; refreshing rains 13th; aurora 20th.

*Marengo, Ill.*—A welcome copious rain 7th; brilliant aurora 19th.

*Aurora, Ill.*—Auroras 21st, 24th, 29th. A good farming month.

*Belvidere, Ill.*—Summer means, 1867,  $67.41^{\circ}$ ; 1868,  $71.06^{\circ}$ ; 1869,  $67.37^{\circ}$ ; 1870,  $71.49^{\circ}$ . No frost since April 29th.

*Winnebago, Ill.*—Frequent meteors 10th; auroras 19th, 21st, 31st. Summer mean  $72.56^{\circ}$ ,  $2.72^{\circ}$  above the average of twelve years.

*Dubois, Ill.*—August average of 12 years,  $3.92^{\circ}$  below this month.

*Hennepin, Ill.*—Showers 6th to 8th, revived herbage and late crops.

*Mt. Sterling, Ill.*—Aurora, streamers to zenith. Plowing and sowing wheat.

*Manitowoc, Wis.*—Auroras, arch and beams, 19th, 21st, arch only 29th.

*Embarrass, Wis.*—Auroras 2d, 4th, 19th, 29th; eight inches rain in seven days up to 29th, made damaging floods.

*Mosinee, Wis.*—Frost and ice 20th; streamers north to south 25th, 26th.

*Baraboo, Wis.*—Excellent month for crops and work, all rains at night.

*Tunnel City, Wis.*—Severe thunder-storm, lives and buildings destroyed 5th; heavy rains and ruinous floods 27th, 28th; triangular aurora, apex near zenith, 29th.

*Minneapolis, Minn.*—Frosts 12th, 19th. Coldest August in fifteen years.

*Litchfield, Minn.*—Light frosts 12th, 18th; bright auroras 19th, 20th.

*New Ulm, Minn.*—Auroras, like waves of fire, lightning flashing in the cloud beneath, 19th, streamers 24th; heaviest rain in several years 22d.

*Clinton, Iowa.*—Fine month; no frost, no cold nights.

*Fort Madison, Iowa.*—Auroras 19th, 20th. Rain April 1 to August 1, 5.16 inches.

*Iowa City, Iowa.*—August averages of thirty-one years: heat,  $70.7^{\circ}$ ; rain, 5.69 inches.

*Rockford, Iowa.*—Very dry till 18th; slight frost 20th.

*Algona, Iowa.*—A good soaking rain 1st. A very pleasant month.

*Boonesboro, Iowa.*—Auroras 19th, 21st. Month  $1.75^{\circ}$  below average of fourteen years.

*Logan, Iowa.*—Slight frost 19th; beautiful meteor with long train 22d.

*Woodbine, Iowa.*—Light frost 26th; faint aurora 24th to 25th.

*St. Louis, Mo.*—End of nearly continuous rain for two weeks 15th; faint auroras 19th, 20th.

*St. Joseph, Mo.*—Five thunder-storms, each uprooting trees, &c.

*Oregon, Mo.*—Fires needed 12th, 13th; auroras, brilliant, 19th, faint 21st, 25th, 28th, 29th; great rain and wind storm, much injury, 28th.

*Corning, Mo.*—Coldest, hardest August storm I ever knew, 12th.

*Williamstown, Kans.*—Melons 1st; auroras, brilliant, 19th, 24th, moderate 21st; meteoric shower 21st. Heavy rains but do not swell the streams much.

*Paola, Kans.*—Heavy thunder-storms and gales 18th, 25th, 28th.

*Lawrence, Kans.*—"Heated term" of fifty days ended 8th—mercury



above 90° on forty-six days, but nights were cool. Rain on sixteen days in August.

*Holton, Kans.*—Much wind, thunder, lightning, rain; ground too wet for plowing.

*Bellevue, Nebr.*—Aurora 19th; brilliant meteor 22d; slight frost 26th.

*New Castle, Nebr.*—Except a few drops, no rain for three months.

*Coalville, Utah.*—Frosts, slight, 24th, kills vines 25th, 29th, 30th.

*Deer Lodge City, Mont.*—Ground squirrels in winter quarters 10th; snowed on mountains 18th, 19th, 23d, 24th, 27th; in valley 18th; ice half an inch thick 25th; auroras, fine 23d, dim 23th.

